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## LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and to improve the character of the service rendered to the public.

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## ST. LAWRENCE TRAFFIC.

The western grain traffic from Manitoba and the adjoining districts, has been diverted largely to American ports, owing to the fact that the Montreal season is so short and ends so abruptly that the grain harvest cannot be transported to tidewater in the St. Lawrence before the river freezes. And Montreal lacks good elevators where grain could be stored for the winter at such cheap rates as would make it worth while for western handlers to ship there and await the opening of spring, when a fleet of tramp steamers could load at once if reasonable insurance on freights and hulls could be secured. But as it is there are no adequate storage facilities, and the grain finds an outlet to market through Portland, Boston and New York, where ships can load all the year round. This year the Dominion, Johnston and other lines withdrew from Montreal altogether, and established themselves at Portland, giving Canadian passengers free railway transportation to the latter city so as to hold the trade. It is feared that other lines will adopt the same policy ere long, unless the difficulties in the way of the St. Lawrence are removed, for, apart from the lowering of the insurance, there is an absence of the excessive risk associated with the more northern route. As the population of Manitoba grows, and its production of wheat increases, the need for Canada to provide an adequate and efficient route for her own grain products become greater, and the ill effects of delay are intensified.

The marine insurance rate is 4 per cent. to New York and Boston, as against 9 or 10 per cent. to Montreal. This makes a difference of \$5,000 to a vessel in favor of American ports, and as the vessels going to Montreal make only about five trips each season it puts the port of Montreal under a disadvantage of \$25,000 for the season for each vessel that plies there. The adoption of remedial measures is earnestly urged. These are, chiefly, the providing of coast aids for the Cape Race region, the establishment of a better lighting system along the waterways giving access to the gulf, better charts, and a hydrographic survey of the river and approaches, and a reorganization of the pilotage system.

## LAUNCH OF THE U. S. S. MISSOURI.

The battleship Missouri was successfully launched at the Newport News shipyard on Saturday last. Fully 15,000 people saw the big craft floated. Miss Marion Cockrell, daughter of Senator Cockrell, of Missouri, was sponsor for the ship, and she performed the duty assigned her with the traditional bottle of champagne, using a bottle of Missouri product for the purpose. The number of distinguished guests gathered around the fair christener on the christening platform was larger than ever seen before.

Among them were Secretary of the Navy Long, Secretary of the Interior Hitchcock, Rear Admiral Melville, U. S. N., chief of bureau of steam engineering; Rear Admiral O'Neill, U. S. N., chief of ordnance; Judge Advocate Lemly, U. S. N.; Lieutenant Governor J. A. Lee, of Missouri, acting for Governor Dockery; Governor Tyler,

of Virginia; Corwin H. Spencer, of St. Louis, representing the Louisiana Purchase Exposition Co.; Congressman Rixey, representing the House Committee on Naval Affairs; Senator Cockrell, and a number of army and navy officers. Mrs. Roosevelt, wife of President Roosevelt, came up from Old Point on the United States dispatch boat Dolphin, with her guests, and viewed the launching from the steamer's deck.

When the big ship had glided off the ways into the water the crowd on the guests' platform gave three cheers for Miss Cockrell, three for the army and navy, three for Secretary Long, then three for the shipyard.

After inspecting the various departments of the plant the guests repaired to the shipyard wharf, where they boarded the steamer Washington, going to Old Point. At the Chamberlin Hotel the customary post-launching banquet was given, the guests mentioned above being on the program as the principal speakers.

## THE NEW FRENCH LINERS.

In a recent issue, Le Genie Civile describes the two new liners—Savoie and Lorraine—recently put in service by the Compagnie Generale Transatlantique. The two are practically sister boats, differing only in some details of the internal arrangements. The length between perpendiculars is 537.74 feet; the breadth, 59.05 feet; the mean draught, loaded, 25.43 feet, and the displacement 15,410 tons. About three-quarters of this displacement is due to the dead load, and but one-fourth is available for coal supply, cargo, passengers and crew. As the bunkers hold about 3,000 tons of coal, the displacement actually available for paying load is only about 7.5 per cent. of the total displacement. On trial the speed reached by Lorraine in calm water was 21.91 knots, whilst with the Savoie, tried under less favorable conditions, the speed on the measured mile was 21.65 knots. The twin-screw engines fitted are of 22,000 indicated horse-power in the aggregate, and they are supplied with steam by return-tube boilers of the ordinary type, designed for a working pressure of 170.7 pounds per square inch. The total grate area of these amounts to 1,224 square feet. There are also, on the upper deck a couple of small Belleville boilers which supply the auxiliary machinery. The latter includes a number of Laval turbines driving the generating machinery for the electric light.

## MR. LONG INTERVIEWED.

The following from a Duluth paper will be read with some interest by vesselmen: "The steamer Huronic, that was launched a short time ago at the shipyard at Collingwood, Ont., will be the fastest steel boat on the Great Lakes, said Charles T. Long, of Toronto, at the Spalding. Mr. Long is of the shipbuilding company and interested in various Canadian transportation lines. Continuing he said:

"The Huronic will be the first boat of the Northwest Transportation Co. to arrive at Duluth next season and three more, just like her, are to be built during 1902, to go in commission in the spring of 1903.

"During the season of 1903 the Northwest Transportation Co. designs to have a boat leave there every day in the week, except Sunday, for Duluth. The four new boats in connection with the United Empire and the Monarch will enable us to do that. They will ply along the usual route via Port Arthur between Sarnia and Duluth.

"But I started out to say something about the speedy qualities of the Huronic. She will be able to steam 18 miles an hour, and she is the only steel steamer on the lakes that can do it, except the North-West and the North-Land. I know that these latter boats are reputed to be very swift, but as near as I can find out they never come up to their expectations as regards speed.

"The Huronic also is the only double deck steamer on the lakes with accommodation for 250 first-class passengers. The first and second-class passengers are to be kept strictly separate. The Huronic is a first-class passenger steamer and she will attract no little attention when she comes out. The freight capacity is 3,000 tons.

"It is an interesting fact that the three new sister boats to the Huronic, which will be built in 1902, will be Canadian products in every sense. They will be constructed from steel made at the Cramp plant at Collingwood, which will begin operations April 1, next, and the ore from which the steel is made comes from the Helen mine on the Michipicoten range."

## THE PRINCIPLES OF COAST DEFENSE.

We referred recently to the lecture on "The Principles of Coast Defense," delivered at Ithaca, N. Y., on Dec. 10, by Capt. John P. Wisser, Art. Corps, U. S. A., before an audience of Cornell students and townspeople. In the course of his remarks, as reported in the Cornell Daily Sun, Captain Wisser said that the vulnerable points in a coast to be defended are the bays and the mouths of the navigable rivers; these points are usually occupied by large cities. "The means of defense of such places," he said, "are two—the navy and coast fortifications. The defense by navy requires points of support, which shall furnish men and supplies. These points serve as bases of operation in offense and as harbors for repairs in case of defeat. Coaling stations and magazines must be a part of their equipment. The defense by fortification is applied to such points of support. Strong strategic points are usually selected for these bases of operation, points convenient for concentration, so that the defensive fleet may readily take the offensive. Fortress Monroe and Key West are two such strategic points on the Atlantic coast, because if either fell into the hands of an enemy, two portions of the defending fleet would undoubtedly be separated.

"In placing the fortifications, the following tactical principles are followed. An enemy's advance must be obstructed without impeding the movements of the defense. This is done by placing torpedoes, mines, and submarine dams. The armament must be superior to that of the attacking force. The flanks must be protected by closing all unnecessary channels, by placing guns at vulnerable points; and by carefully watching the approaches by the aid of searchlights. Counter mines must be prevented by torpedo boats and torpedo boat destroyers."

## LIFE SAVING SERVICE.

The story of the work of the government life saving service, "Its Heroism and Some of Its Heroes" thrilled the Boston Boot and Shoe Club last week at its 96th dinner held at the Brunswick, says the Boston Herald of the 10th instant. For about an hour Major Horace L. Piper, of Washington, D. C., the assistant General Superintendent of the United States Life Saving Service, told something of what the service means—of the half century past, during which the system has been developed, how it shook itself free from the sloth of mismanagement and from the corruption of political spoils, the efficiency brought about through the discipline of drill, the apparatus, and, more than all these things combined, the high standard of courage, man and crew, which has made the United States the proud possessor of the best life saving service of the world.

The men who go out to vessels in distress, Major Piper said, fight with a valor that is peculiar; theirs is the fight against the wrath of gods, and not men—no pageantry, no inspiring drum or bugle, and under the further disadvantage of being few in number. What seemed most strongly to appeal to the men of commerce gathered about the tables was the element of personality and grim perseverance demanded in the men, and Major Piper went into the details of two incidents of life-saving work that seemed to carry his listeners with him to the scenes of storm and night.

One of the heroic acts of service told was that of Fred E. Hatch, of Cleveland, Ohio, who jumped from a main-boom of a stranded vessel, thrashing and slamming and pounding in the seas, onto a mizzen rigging, eventually rescuing two men who were clinging there. The other instance told at length was that of the rescue of the crew of seven of an English ship on the Rose and Crown shoal, 15 miles off Nantucket, by Capt. Walter Chase and his gallant crew of Coskata station on Nantucket island—the remarkable management in taking the frenzied mariners into the 23-foot boat, and the long struggle back against sea and wind in 10 degrees above zero weather.

The heroism of effort was in the service, he pointed out; and in both these two cases, he emphasized, the men who had taken part in them settled strictly down to the drudgery of routine—the patrol, the drill, the housework, ready for the next case to require their services.

The Scotch type boilers for the barge Australia, which undergoes conversion into a steamer at Manitowoc, will be built by the Manitowoc Steam Boiler Works.





## CHICAGO.

*Special Correspondence to The Marine Record:*

The following meteorological observations are furnished by the office of the United States Weather Bureau, Chicago, for the week ending January 1: Prevailing wind directions for the week, southwest; highest velocity, 33 miles from the west on December 30, 1901; mean temperature for the week, 32 degrees; highest temperature, 40 degrees on December 27th; lowest 24 degrees on January 1.

It is now given out that negotiations are well advanced for placing the steamers Badger State and Empire State, now being re-built at Manitowoc, in an opposition line between Detroit and Cleveland. The boats are owned by Barry Brothers, now operating a line between Chicago and Milwaukee. Favorable offers have been made to have them operate the company season between Detroit and Cleveland, and it is probable that the new line will be established.

Forty thousand dollars is to be expended in deepening and widening the waterway across Keweenaw Point, including Portage river, Portage lake and the two ship canals next season. The channel is to be deepened to twenty feet, with a width of 120 feet. There will be \$40,000 available for this work, which will be sufficient to accomplish it. When the work is completed it will wind up the improvements on Portage lake and Portage river. The work will be commenced as soon as possible in the spring. The department will advertise for bids in a few weeks.

Because of a reduction of wages from 26 to 15 cents an hour, 115 freight handlers employed by the Crosby Transportation Co., at Grand Haven, went on strike on Wednesday. The cut has been made every year by the company, but the men decided to make a stand against it this year. A meeting of the strikers was held at which a longshoremen's union was organized and a committee appointed to wait on the company officials. The steamer Nyack returned to Milwaukee with only about half her Grand Haven cargo unloaded.

The Pere Marquette car ferry, Muskegon, which went ashore at Ludington a week ago, after striking the bar, was released and towed into port. The wrecking job was performed by Captain James Reid, of Sarnia, Ont. Good weather favored the wreckers. The steamer was pumped dry and then floated in a sixteen-foot passage dredged by the Pere Marquette car ferry No. 15. It is believed the loss to the underwriters will reach \$60,000. The Muskegon will go into drydock at Milwaukee for a thorough overhauling and final repairs.

The steamer A. G. Brower, the first of the fleet building for the United States Transportation Co., by the American Ship Building Co., was successfully launched at the South Chicago yards on Saturday afternoon. The christening ceremony was performed by Miss J. Florence Brown of Utica, N. Y. The new boat is 346 feet long, 43 feet beam and 28 feet deep. She will come out next spring. Capt. W. W. Brown, of this city, who is general manager of the United States Transportation Co., witnessed the launch.

It is likely that Chicago will have the call in the selection of the president for the Lake Carriers' Association for next year. The election will be held at the annual meeting of the Lake Carriers' Association in Detroit early in January, and it is now reported that a boom is on for J. G. Keith, a prominent vessel owner of Chicago, and an energetic worker for the best interests of the Association. From this standpoint no better selection could possibly be made than in the unanimous election of Capt. Keith to the honorary position of president of the Lake Carriers' Association.

The death of Mr. Peavey this week is a loss that will be felt by a large portion of the western people. With the exception of Mr. J. J. Hill, who was his senior by 14 years, Mr. Peavey has more finished work standing to his credit than any man in the northwest. The unfinished work was small. For Mr. Peavey to start anything was to finish it successfully and expeditiously. A list of the enterprises in which he was interested would be too large to publish, but in the grain business he owned or controlled four lines of country elevators, with a capacity of about 10,000,000 bushels; three terminal systems at Duluth, with 12,000,000 bushels capacity; three at Minneapolis with 4,000,000 bushels capacity, and terminals at Chicago, Kansas City and Omaha. During the past year he built and put afloat four magnificent steamers, to ply between Buffalo and Duluth, at a cost of \$1,250,000.

The Lumber Transit Co., with a capitalization of about \$2,500,000, a new trust that is being organized in Chicago, is another step in the direction of the effort to control the lumber carrying trade of the Great Lakes. It is claimed that 50 to 60 boats are already in the combination, and

that the details of the scheme are being carefully worked out. The boats that are to be purchased by the trust are to be paid for partly in stock and partly in bonds. A general meeting of the owners of lumber carrying boats is scheduled to be held in Detroit shortly after the January meeting of the Lake Carriers' Association. The promoters think that if they can get a majority of the lumber carrying vessels into the new organization, the others will soon fall in line, and then the trust will be in a position to make rates and settle the questions that have caused the lumber carriers so much trouble during the past few seasons.

Capt. D. D. Gaillard, United States Engineer in charge at Duluth, has prepared a statement for the coal receipts at the head of Lake Superior for the season of 1901, together with a comparative statement of receipts with other years. He finds that there has been an increase in the volume of coal delivered at the docks on the Duluth-Superior harbor every year since 1895, which is as far back as the comparisons extend. According to one of the Duluth coal men the total of hard coal delivered to Lake Superior this season to December 1, was 794,643 tons (820,000 estimated for the season) while Duluth-Superior, according to the government engineer's report, has received 921,531 tons. The coal men further claim that only about 80 per cent. of all the hard coal coming to Lake Superior is delivered at the head of the lakes. It is possible that the vessel masters have carelessly reported "hard" coal, when they should have reported "soft" coal. But the coal men say that the discrepancy is too great for it to be accounted for in that manner. Capt. Gaillard, Corps of Engineers, U. S. A., is satisfied with the accuracy of the figures coming from his office, and the mystery of where the discrepancy lies will doubtless be ultimately cleared up.

A special dispatch to the Chronicle from Washington says: There will be no ship subsidy legislation by the Fifty-seventh Congress. Senator Frye's compromise bill introduced during the opening days of the session, is as distasteful to a large element of Republican Senators and Representatives as was the original Hanna-Grosvenor bill, which failed to pass last winter. It is stated on high authority that, notwithstanding that the Senate Committee on Commerce was reorganized by Hanna and Frye for the distinct purpose of assuring a majority vote for the new ship subsidy bill, that majority is yet to be obtained. Senator McMillan, of Michigan, and Senator Nelson, of Minnesota, members of the committee, are opposed to the bill on principle and have said that they will not vote to report it to the Senate with a favorable recommendation. Elkins, of West Virginia, does not like it, and although he would be disposed to report it to the Senate he will never consent to its passage. The defection of McMillan and Nelson, however, would be sufficient to condemn the bill to defeat in the committee. The backbone of the ship subsidy lobby was broken by last session's failure. It has not recovered its old-time assurance. It has failed to reorganize its press bureau in Washington. It has made scarcely any showing at the national capital since the bill was first introduced by Senator Frye. Senators Frye and Hanna will make a serious effort to pass the bill. They will endeavor to have it made a special order of business very soon after Congress re-assembles, in the event of their being successful in securing a majority report on it from the Committee on Commerce.

## DULUTH-SUPERIOR.

*Special Correspondence to The Marine Record:*

Capt. M. Ryan, grand president of the Tugmen's Protective Association, has taken the position of chief engineer of the Great Lakes Towing Co. Capt. Ryan was the first president of the union and the success of the organization has been largely due to his efforts. He will continue a member of the union, having been elected president of the local branch at its last meeting.

The geological survey has just issued a special publication on the iron ore deposits of the Lake Superior region, showing the output for last year to have been 19,121,393 long tons, as against 17,802,955 in 1899, and 13,799,308 in 1898. The report states that Lake Superior ores are of a better grade than those from any other part of the United States, and that the actual amount of iron produced in the Lake Superior region is four-fifths of the total amount produced in the United States. The maximum product of Great Britain, which is the greatest of iron ore producers, with the exception of the United States, was in the year 1882. In that year a little over 18,000,000 long tons was produced by Great Britain. The production of the Lake Superior region alone for the year 1900 far surpassed this maximum. The ore, also, was of a much higher grade, containing more metallic iron than the product of Great Britain's best year. It is therefore evident, says the report, that the Lake Superior region is by all odds the most important single factor in the world's production of the one metal which is more important to man than all others.

The steamer Imperial which went into winter quarters at Walkerville, sank at her dock, and is now resting on the bottom in about fifteen feet of water. It is thought that the frost burst the sea-cocks, permitting the water to enter the hold of the vessel. The steamer plied between Pelee Island and Windsor during the past year, and is owned by the Lake Erie & Detroit River Railway Co., Walkerville. William Woollett, general manager of the company, says he does not know when the boat will be raised, and can give no estimate as to the probable damage.

## CLEVELAND.

*Special Correspondence to The Marine Record:*

The local lodge of the Marine Engineers have completed arrangements for their annual reception and ball, which will be held at the Chamber of Commerce Auditorium Friday evening, February 7.

The Seither Transit Co., of Mentor, was incorporated by the Secretary of State at Columbus last week with \$225,000 capital stock. The company is to build, purchase, lease and operate vessels on the Great Lakes. The incorporators are: S. H. Holding, B. Seip, Frank S. Masten, George B. Marts and N. B. Snively. The new company will operate the 5,000-ton ship building for Frank Seither of this city, and others, by the American Ship Building Co. She will come out next season.

Mr. Duncan Frazer, who is one of the best known engineers on the lakes, has taken the position as chief engineer with the United States Transportation Co., of which Capt. W. W. Brown is manager. Mr. Frazer was chief engineer of the Northern Steamship Co. and later of the Bessemer Steamship Co. until the consolidation of the Pittsburg Steamship Co., when by virtue of his business contract he went over to the latter firm. He has now resigned the position of assistant chief engineer of the trust fleet.

The following meteorological observations are furnished by the office of the United States Weather Bureau for the week ending January 1: Prevailing wind directions for the week, southwest; highest velocity, 42 miles from the northwest on the 31st; mean temperature for the week, 32 degrees; highest temperature, 40 degrees on the 26th; lowest, 21 degrees on the 1st. Sunrise and sunset data computed for local time: January 3, sun rises 7:29, sets 4:42; January 6, sun rises 7:28, sets 4:44; January 9, sun rises 7:28, sets 4:48.

The Steel Steamship Co., with a capital stock of \$1,000,000, was incorporated at Columbus this week. The incorporators are J. C. Gilchrist, F. M. Osborne, F. W. Hart, W. H. Lamprecht and A. J. Gilchrist. The new company will operate the five steel steamers ordered by Mr. Gilchrist and which are building at Lorain. Two of the boats have been launched. They are the F. M. Osborne and F. W. Hart. All the vessels will be in commission at the opening of navigation next spring. The capital stock of the Inland Star Steamship Co. was increased from \$100,000 to \$500,000.

Chief Engineer Hayes has classed all the steamers of the fleet and fixed the rate of wages that will be paid. In the first class there are thirty-six boats and they will all carry three men in the engine room. There are twenty-three steamers in the second-class and the third-class has ten steamers. Mr. Hayes has signed engineers for all the steamers and made contracts with a few men for the Peavey Steamship Co. The first-class engineers get \$1,500 for the season; second engineers \$960 and third, \$720. On the second-class steamers the chief gets \$1,350 and second \$840. On the third class the chief is to receive \$1,200 per year and the second \$720.

Mr. Joseph Hayes, chief engineer of the Pittsburg Steamship Co. has received a letter from general manager Wolvin instructing him to prepare a list of the engineers in the employ of the company that are entitled to the bonus that the company has decided to pay. It was not expected that the men would receive anything but their regular salary for the past season and the engineers are better off than they figured on. The amount for the past season will not be large, but next year the men will receive from \$100 to \$150 in addition to their regular salary. Mr. Hayes has made contracts with his chief engineers and fixed the rate of wages for all boats next season.

The annual meeting of Forest City Lodge of the Licensed Tugmen's Protective Association of the Great Lakes was held at the lodge rooms on Superior street last Friday night, and was well attended. The following officers were elected: President, Michael McDonough; vice president, Capt. Thomas McNaugh; recording secretary, Capt. John Ryan; corresponding secretary, William Tuft; financial secretary, Joseph Noyman; treasurer, Capt. Edward Kemmett; trustees, Capt. Fred Hale, Capt. Harry Coulter, Thos. Agen and Herman Beers. Joseph Noyman was elected delegate and Timothy Mahoney alternate, to the annual convention which will be held in this city on January 20. The members of the local lodge are making arrangements to give the visiting delegates a good time next month. Last year the annual meeting was held at Buffalo.

A short time ago the announcement was made that the Pittsburg Steamship Co., at the instance of A. B. Wolvin, its general manager, has decided to give a bonus to each of its engineers. In this action the engineers' department was only a little ahead of the office of the superintendent which has charge of the masters of the boats, for it is learned now that a plan almost identical with that of the engineers will be followed with the masters. The exact provisions have not been outlined so far, and the amounts have not been definitely fixed, but it is expected that they will be in a very short time. The plan is an enlargement of the old Carnegie idea of dividing the earnings of the company with those who are in a position to affect the cost of operation of the boats and to promote economy and effectiveness by industry and application. There is some talk if its being carried further among the men employed on shipboard, but this has not been officially announced.



The annual meeting of the local lodge of the Shipmasters' Association held last Friday, was well attended. The masters were in session for several hours, but most of the time was spent in selecting officers for the coming year. The following officers were elected: Capt. S. C. Allen, president; Capt. C. H. Woodford, first vice president; Capt. A. J. Greenley, second vice president; Capt. Thomas Jones, treasurer; Captain O. Oleson, secretary. Capt. S. C. Allen was elected delegate and Capt. J. A. Holmes alternate to the Grand Lodge which will meet at Washington the third week in January. The new officers will be installed next Friday. Capt. Allen, who was elected president, has been a member of the Shipmasters for a number of years and has been a successful shipmaster. During the past season he was in charge of the steamer Robert Fulton of the Pittsburg fleet. First Vice President C. H. Woodford, is master and part owner of the steamer A. G. Lindsay, and Second Vice President A. J. Greenley sails the steamer Corsica. Treasurer Jones and Secretary Oleson have been ashore for some time. Capt. Jones has been treasurer of the local lodge since it was organized. The last boat he sailed was the steamer Iroquois. Mrs. Jones presented the lodge with a picture of the captain. Capt. H. L. Savage was elected to membership. The Shipmasters' annual reception and ball will be held at the Chamber of Commerce Wednesday evening, January 15.

#### BUFFALO.

##### *Special Correspondence to The Marine Record.*

Government plans are being prepared by Major Symonds, Corps of Engineers, U. S. A., for two new light-houses necessitated by the breakwater improvements at this port. One of the proposed houses will be at the south end of the new north breakwater recently finished at the entrance to Buffalo river. The other proposed light-house is to be at the Stony Point entrance to the new harbor for the benefit of boats bound for the steel plant and of other vessels. Major Symonds is hopeful of getting an appropriation from Congress for both lighthouses.

The Lackawanna Iron and Steel Co. is about to build a new iron ore dock at Buffalo that will be one of the most complete on the chain of lakes. This will constitute much of the improved machinery for the handling of ore of which so much has been said of late. It is said that the dock will be capable of handling 2,000,000 tons of iron ore during a given season. This is about a duplicate for the C. & P. dock in this city, and therefore one of the largest at the receiving ports of Lake Erie. The Lackawanna railroad is also said to be increasing its rolling stock in proportion to the increased demand that will be made upon that road as an iron ore carrier.

Following are the officers elected by the Buffalo lodge of Shipmasters at the annual meeting held on Saturday evening: President, Capt. J. H. Coleman; first vice president, Capt. Walter Robinson; second vice president Capt. Charles A. Potter; secretary, Capt. John Perew; treasurer, Capt. John Hall; chaplain, Capt. Charles McMillan; marshal, Capt. Daniel Coughlin; warden, Capt. Alexander Kelley; sentinel, Capt. P. O'Neil; delegate to Grand Lodge, Capt. J. H. Coleman; alternate, Capt. Walter Robinson. Grand Lodge meets in Washington, D. C. Installation of the above officers will be had in the lodge rooms Saturday evening next, Capt. L. P. Goodall officiating as installing officer. A banquet will follow.

W. C. McMillan, president and general manager of the Detroit and Cleveland steamer line, and general manager of the Detroit and Buffalo Line, spent Sunday in this city. He took occasion while here to familiarize himself with the dock privileges at the foot of Illinois street, where the new boats of the Detroit and Buffalo Line will arrive and depart next summer. It is understood that some improvements about the offices and freight rooms will be made. Manager McMillan is sanguine of success for the new line. He states that the Eastern States will be ready to go into commission on June 1, and the Western States, which will be launched early in January, by the 1st of July. The new steamers will be scheduled to depart from Detroit and Buffalo every afternoon at 5 o'clock, and to arrive at the opposite port at 6 or 7 o'clock in the morning. It has not been definitely settled whether the run of 256 miles will be scheduled for thirteen or fourteen hours' schedule.

News was received here on Friday last concerning the death of one of the best known engineers who has plied the Great Lakes for years past, Chief Engineer George Freitsche of the steamer Chemung, of the Union Steamboat Co.'s line. Six weeks ago he was forced to leave his boat on account of ill health and was advised to go to Denver. He was accompanied to the western city by his brother, Ferdinand Frietsche, Jr., of Minneapolis, leaving for Denver on Wednesday of last week. His condition did not improve upon his arrival there; in fact, he grew rapidly worse, the end coming quite suddenly on Christmas eve. The deceased was a resident of Tonawanda, where he resided with his parents. He was on the lakes for more than a quarter of a century and for the past twelve years had been a chief engineer in the employ of the Union line. For the past eight years he had been chief engineer of the Chemung. He was one of the best known engineers on the lakes and was exceedingly popular in all the ports. He was forty-two years old and a single man. He was a Mason, a Knight Templar, a Mystic Shriner and a member of the Royal Arcanum. He was only known to be liked, respected and honored as a man among men.

#### DETROIT.

##### *Special Correspondence to The Marine Record.*

The following meteorological observations are furnished by the office of the United States Weather Bureau, Detroit, for the week ending December 31. Prevailing wind directions for the week, west; highest velocity, 34 miles north west on December 31; mean temperature for the week, 30 degrees; highest temperature 47 degrees on the 25th; lowest, 23 degrees on the 30th.

It is stated that hereafter all supplies for the steel trust's fleet of steamers will be handled at Sault Ste. Marie. This necessitates immense warehouses and docks, which will be located at the foot of Johnston street, on which work will be commenced at once, plans having been accepted. The buildings will be of stone, two stories high, and a steamer built on the tug plan will also be used in the river.

The announcement of the incorporation of the Algoma Steel Tube Co., (a Clergue enterprise) in Ontario, with a capital of \$30,000,000, has set citizens of the Michigan "Soo" to wondering where they are at. F. H. Clergue as well as his representatives, have repeatedly stated that the tube works was to be an American enterprise, but the Toronto dispatch says with authority that the Canadian "Soo" picks the plum. It is impossible to locate Clergue or any one who has authority to affirm or deny the report.

The Marine Engineers' Beneficial Association, Saginaw, held its annual meeting and the following officers were elected for the year of 1902: President, A. G. Moll; vice president Richard E. Mantell; chaplain, W. P. Whalen; treasurer, Jno. Henry; financial secretary, Walter Henry; recording secretary, Geo. A. Thresher; corresponding secretary, Harry E. McArthur; conductor, Alexander Frazer; doorkeeper, Fred Pflueger. John Henry representative to the national convention, held in Washington, D. C., Jan. 20, 1902. The association was organized Feb. 6, 1892, and has been one of the most prosperous institutions of its kind in the state, having a fair membership, and its financial standing being excellent.

A large amount of wheat is being received at Duluth at present that does not figure in the daily receipts, or in the statistics of wheat in store reported on the Board of Trade. It comes in bond from Manitoba. Some authorities on Manitoba railroad and grain matters have said that after this crop there will be little or no wheat arriving here from across the border in bond for the reason it will be hauled to Fort William by the Canadian Northern for storage in its own elevators and shipped in boats. But the rapid increase in production of Manitoba wheat makes it possible that considerable of it will still come this way as in the past. At least that is the impression of some Duluth grain authorities.

The following vessels are in winter quarters here: George Stone, Gladstone, John B. Ketcham, Oneida, Emerald, Companion, Senator, Monitor, City of Erie, Livingstone, Clint, Eastern States, Paliki, Pennsylvania, Monaguagon, Balize, Mystic Star, A. L. Hopkins, City of Buffalo, Idlewild, Stafford, Ed. McWilliams, Newell Hubbard, Charles Chambers, Tashmoo, Greyhound, Ogemaw, Wilcox, City of Alpena, City of Mackinac, Simon Langell, Aranac, Bay City, Saginaw, Mike Corry, Manitou, Oak Leaf, John Oades, State of Ohio, State of New York, Buell, Jesse Farwell, Maria Martin, Norwalk, Moonlight, Westford, E. A. Fulton, Koal Kabin, Search, William Case, Seattle, Hurlbut, Hackett, Forest City, William McGregor, Hayward, Bessie, Homer Warren, Ida Keith, Starkey, Newsboy, Wyandotte, Hattie, Barkalow, Mary, George Sturges, Tillie May, Richard Martini, W. H. Rounds, Embury, Champion Snook, City of Detroit, City of Cleveland, City of Toledo, Favorite, Reliable and Frank E. Kirby.

The wreck and casualty report of the lakes for the season of 1901 is being put in shape for publication, and Norman B. Conger, inspector and marine agent of the Weather Bureau stationed at this port, furnishes the following details: There were 177 vessels damaged to more or less extent through weather conditions during the season, to the amount of \$1,149,300. Of this amount, \$688,700 was in the total loss of 37 vessels. Fog was responsible for damages amounting to \$230,200. The largest loss of life and property occurred with the foundering of the steamer Hudson on Lake Superior September 16, in which 24 lives were lost. The total amount of losses this season nearly equals the combined losses of the season of 1899 and 1900. Lake Superior heads the list this season with the largest loss, \$524,450; Michigan, \$199,000; Huron, 305,850; Erie, \$39,000; Ontario, \$16,500, and connecting rivers, \$64,500. There were reported 90 lives lost through stormy weather conditions, and 100 from other causes. The latter includes loss of life from upsetting sailboats, etc. The report shows that the worst weather conditions prevailed in September. Of the total of 190 lives lost, 46 were lost during that month.

The blast furnace deal, involving the expenditure of \$1,000,000 for the erection of a large plant in Delray, near the Solway Process Co., has not yet been closed, says a Detroit dispatch. It was stated recently by Messrs. Baird & West, who have the matter in hand, that nothing would be done about it for some time. It is known that an arrangement was made with the Clergue syndicate to furnish the ore, but no steps have been taken toward the completion of the deal, owing to the uncertainty as to what action Congress might take regarding the tariff. "Contingent on the erection of the blast furnaces, the Detroit Southern

has arranged to buy property and erect the larges' coal tipples on the Great Lakes," said a gentleman interested in the deal. "It was not the intention to say anything about the matter at the present time, but as a portion of the facts have been made public, I can see no objection to giving an outline of the plans. It was and is the intention of the Detroit Southern, if the blast furnace deal goes through, to make Delray one of the greatest coal shipping points on the Great Lakes. The relations of the Detroit Southern and the Norfolk & Western are very friendly, and arrangements between the two roads will undoubtedly be made by which the upper lakes and Canadian ports can secure coal at a much cheaper price than if handled from the present shipping points. The statement has been made that the capital for the blast furnaces has all been subscribed, but I do not think this is correct. That it can be secured there is no doubt, provided the right men are selected to manage the blast furnace."

#### PORT HURON.

##### *Special Correspondence to The Marine Record.*

The election of Ed. J. Kendall, the marine reporter, to Commissioner of Poor for St. Clair Co., will in no way conflict with his marine reporting business. He will be found as usual at his marine office next spring.

At the request of Mrs. Dilgren, of Fairport Harbor, O., H. C. Bristol, marine reporter of East Tawas, had the body first found off the Baltimore taken out of the grave and on close examination found marks sufficient for the identification of John Dilgren, second steward of the Baltimore. The body will be sent to Fairport. Only one body remains unclaimed.

Miss Mary Maunio, of Twelfth street, and Capt. Ed. Carey, of Hose House No. 1, were married at St. Joseph's church this morning, Father Spaeth performing the ceremony. After the wedding the couple left on their bridal tour to Cleveland. Mr. Carey has many friends in Port Huron, and is held in high esteem by his associates. He was recently appointed captain of No. 1. Capt. Carey sailed for several years before entering the fire department.

On last Thursday night the engine room at Dunford & Son's lower drydock was discovered on fire. The flames had gained considerable headway before the arrival of the department, but by hard work their spread was prevented. One engine was practically destroyed and the interior of the engine room badly charred. Messrs. Dunford & Son estimate their loss at about \$9,000 which is covered by insurance. It is believed that one of the engines can be repaired and started up on Saturday. How the fire started is a mystery.

The members of Huron Harbor, Masters' and Pilots' Association, elected officers as follows: Captain, John T. Hanson; first pilot, Guy Geel; second pilot, Thos. F. Zealand; purser, J. W. Montgomery; chaplain, Robert Pardy; delegate to the Grand Harbor, J. W. Montgomery; alternate, J. W. Kelley. The members will hold informal parties in their rooms every two weeks and it is probable that arrangements will be made for a ball in the near future. Huron Harbor has the finest rooms of any other Harbor on the lakes. The boys have worked late and early to get their rooms in shape and their work shows good results. Everything is in fine shape and the boys are taking advantage of it now.

#### STATEMENT OF THE VISIBLE SUPPLY OF GRAIN.

As compiled by George F. Stone, Secretary Chicago Board of Trade, December 28:

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BALEY Bushels.
Buffalo.....	6,491,000	602,000	1,032,000	32,000	1,434,000
" afloat.....	2,865,000	182,000	113,000		
Chicago.....	6,876,000	4,995,000	943,000	977,000	135,000
" afloat.....	417,000				
Detroit.....	868,000	230,000	5,000	214,000	58,000
Duluth.....	9,040,000	379,000	137,000	438,000	254,000
" afloat.....	511,000				
Fort William, Ont..	1,965,000				
Milwaukee.....	316,000	76,000	171,000	55,000	136,000
Port Arthur, Ont....	80,000				
Toledo.....	338,000	616,000	751,000	253,000	
Toronto.....	15,000				21,000
On Canals.....	46,000	3,000	112,000	37,000	50,000
Grand Total.....	58,648,000	11,252,000	5,266,000	2,481,000	2,453,000
Corresponding Date, 1900.....	61,408,000	9,053,000	9,393,000	1,262,000	2,662,000
Increase for week.....		121,000			462,000
Decrease " ".....	157,000		391,000	79,000	

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

We learn from Capt. Benjamin F. Perkins, grand captain's clerk of the "American Association of Masters and Pilots of Steam Vessels" that the annual convention of the Grand Harbor will be called to order on January 15th; and that the headquarters of the delegates will be at the Metropolitan Hotel, Washington, D. C. The date as previously announced was January 6th, which appears to have been an error.



## TWO BILLS RELATING TO THE HARTER ACT.

The following two bills were introduced in the Senate and referred to the Committee on Commerce. They relate to the Harter Act and the so-called Loudon Clause, and are of great interest to those interested in the transportation of merchandise, etc., between the United States and foreign ports:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall not be lawful for the manager, agent, master, or owner of any vessel transporting merchandise or property from or between ports of the United States and foreign ports to insert in any bill of lading or shipping document any clause, covenant, or agreement whereby it, he, or they shall be at liberty to impose on such merchandise or property any loading, unloading, landing, weighing, reweighing, or other charges additional to the rate of freight inserted in the bill of lading or shipping receipt. Any and all words or clauses of such import inserted in bills of lading or shipping receipt shall be null and void and of no effect.

Sec. 2. That it shall be unlawful for the manager, agent, master, or owner of any such vessel to impose upon the merchandise or property so carried by it, originating in the United States, by charge additional to the freight charged thereon for lifting, sorting, or piling said merchandise, or for portage thereon, in so far as the said lifting, sorting, piling, or portage is necessary to the identification of the said merchandise or property and making proper delivery thereof, but any expense or charge for such lifting, sorting, piling, or portage shall be borne by the said vessel at its own cost.

Sec. 3. That for a violation of any of the provisions of this act the agent, owner, or master of the vessel guilty of such violation shall be liable to a penalty of five hundred dollars for each offense, said penalty and costs to be a lien upon the said vessel and to be recoverable by the United States in an action of libel instituted in any district court of the United States within whose jurisdiction such vessel may be found; and in addition to the said penalty the agent, owner, or master of said vessel shall be liable to the party upon whose goods such unlawful charge is made for the amount of such unlawful charge with the sum of one hundred dollars added, the said amount and costs to be a lien against said vessel, and such vessel may be libeled therefor by the said injured party in any district court of the United States in whose jurisdiction said vessel may be found.

Sec. 4. That this act shall take effect from and after the — day of — nineteen hundred and —.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section one of the act entitled, "an act relating to navigation of vessels, bills of lading, and to certain obligations, duties and rights in connection with the carriage of property," approved February thirteenth, eighteen hundred and ninety-three, be, and is hereby, amended so as to read as follows: "That it shall not be lawful for the manager, agent, master or owner of any vessel transporting merchandise or property from or between ports of the United States and foreign ports to insert in any bill of lading or shipping document any clause, covenant, or agreement whereby it, he, or they, shall be relieved from liability for loss or damage arising from negligence, fault, or failure in proper loading, stowage, custody, care or proper delivery of any and all lawful merchandise or property committed to its or their charge, or any clause, covenant, or agreement whereby there is imposed on any such merchandise or property, or on the consignee or consignees thereof, the payment of any port, harbor, dock, landing or sorting charges, or charges of any kind for the discharge or delivery thereof, the payment of which is by the laws, statutes, or customs of the foreign country or countries to which such merchandise or property shall be transported imposed on such manager, agent, master or owner, or any person or agencies other than the consignee or consignees thereof; or any clause, covenant, or agreement whereby are impaired the rights or privileges granted to the consignee or consignees of such merchandise or property by the laws, statutes, or customs of the foreign country or countries to which such merchandise or property shall be transported and any and all words and clauses of such import inserted in bills of lading or shipping receipts shall be null and void and of no effect.

Sec. 2. That this act shall take effect from and after the first day of —, 1902.

## MANITOWOC WINTER FLEET.

The winter fleet of Manitowoc consists of 21 steamers, 5 barges, 14 schooners and 2 tugs, a total of 42 vessels, as against 36 steamers, 5 barges and 17 schooners, constituting a total of 58 vessels, a year ago. The tonnage of the present fleet are as follows: Steamers—Simon J. Murshoving a decrease of 14,864 tons. The vessels of the present fleet are as follows: Steamers—Simon J. Murphy, Spokane, Alfred Mitchell, Pascal P. Pratt, Tampa, A. Folsom, Cuba, Helena, D. C. Whitney, F. E. Spinner, Raleigh, City of Rome, Badger State, Empire State, Lawrence, Christopher Columbus, Indiana, Virginia, Chicago, Sheboygan and Georgia. Barges—Athens, Tyrone, Aurora, B. W. Parker, Tokio. Tugs—Arctic and Golden. Schooners—Lizzie Metzner, Isolda Bock, Emma L. Nielson, Merchant, Jessie Martin, Winnie Wing, Seaman, Burt Barnes, Oscar Newhouse, Mishicott, Franc Miner, Elva, J. H. Hall and Lineria.

## STATISTICAL REPORT OF LAKE COMMERCE.

THROUGH CANALS AT SAULT STE. MARIE, MICHIGAN AND ONTARIO, FOR THE MONTH OF DECEMBER, 1901.

EAST BOUND.			
Articles.	U. S. Canal.	Canadian Canal.	Total.
Copper, net tons.....	1,355	....	1,355
Grain, bushels.....	2,203,739	....	2,203,739
Building stone, net tons...	....	....	....
Flour, barrels.....	301,231	26,935	328,166
Iron ore, net tons.....	156,044	....	156,044
Iron, pig, net tons.....	....	....	....
Lumber, M. ft. B. M.....	11,366	....	11,366
Silver ore, net tons.....	....	....	....
Wheat, bushels.....	5,943,460	494,500	6,437,960
Genl. Mdse., net tons.....	1,836	3,209	5,045
Passengers, number.....	17	393	410
WEST BOUND.			
Coal, hard, net tons.....	9,850	....	9,850
Coal, soft, net tons.....	84,210	2,381	86,591
Flour, barrels.....	....	....	....
Grain, bushels.....	....	....	....
Manuf'd iron, net tons.....	11,021	5,316	16,337
Salt, barrels.....	400	....	400
Genl. Mdse., net tons.....	3,684	999	4,683
Passengers, number.....	....	564	564
Freight:			
East bound, net tons.....	446,691	21,042	467,733
West bound, net tons.....	108,825	8,696	117,521
Total freight, net tons.....	555,516	29,738	585,254
Vessel passages, number..	266	128	394
Reg'd tonnage, net tons...	357,190	29,491	386,681

Compiled at St. Mary's Falls Canal, Michigan, under direction of Colonel G. J. Lydecker, Corps of Engineers, U. S. A. Joseph Ripley, Assistant Engineer and General Superintendent.

## STATISTICAL REPORT OF LAKE COMMERCE.

THROUGH CANALS AT SAULT STE MARIE, MICHIGAN AND ONTARIO, FOR THE SEASON OF 1901.

EAST BOUND			
Articles	U. S. Canal	Canadian Canal	Total
Copper, net tons.....	86,903	11,698	98,601
Grain, bushels.....	22,051,033	2,653,021	24,704,054
Building Stone, net tons..	42,309	4,275	46,584
Flour, Barrels.....	6,431,899	1,202,056	7,633,955
Iron Ore, net tons.....	16,493,916	1,596,702	18,090,618
Iron, Pig, net tons.....	21,683	8,662	30,345
Lumber, M. ft. B. M.....	1,060,880	11,244	1,072,124
Silver Ore, net tons.....	....	....	....
Wheat, bushels.....	43,217,104	9,595,532	52,812,636
Gen'l Mdse., net tons.....	51,243	28,480	79,723
Passengers, number.....	13,828	15,135	28,963
WEST BOUND			
Coal, hard, net tons.....	730,441	74,052	804,493
Coal, soft, net tons.....	3,352,752	435,891	3,788,643
Flour, Barrels.....	165	230	395
Grain, bushels.....	5,300	51,193	56,493
Manuf'd Iron, net tons....	129,819	46,279	176,098
Salt, barrels.....	389,889	53,885	443,774
Gen'l Mdse., net tons.....	380,321	97,997	478,318
Passengers, number.....	15,873	14,827	30,700
Freight:			
East bound, net tons.....	20,930,117	2,157,625	23,087,742
West bound, net tons.....	4,651,921	663,402	5,315,323
Total Freight, net tons....	25,582,038	2,821,027	28,403,065
Vessel Passages, number..	15,837	4,204	20,041
Reg'd Tonnage, net tons..	22,222,334	2,404,642	24,626,976

NOTE:—In addition to the above traffic 10,100 cords pulp wood and 9,000,000 ft. pine logs passed over the Rapids, bound for lower lake ports.

Compiled at St. Mary's Falls Canal, Michigan, under direction of Colonel G. J. Lydecker, Corps of Engineers, U. S. A. Joseph Ripley, Assistant Engineer and General Superintendent.

## STATISTICAL REPORT OF LAKE COMMERCE.

THROUGH CANALS AT SAULT STE. MARIE, MICHIGAN AND ONTARIO, FOR THE SEASONS OF 1900 AND 1901.

Items	Seasons		Increase Per cent	D'c'se Per cent
	1900	1901		
Vessels:				
Steamers, Number..	14,426	14,372	....	....
Sailing, Number....	4,004	4,482	12	....
Unregistered, N'mb'r	1,022	1,187	16	....
Passages, Number..	19,452	20,041	3	....
Tonnage:				
Regist'd, net tons...	22,315,834	24,626,976	10	....
Freight, net tons..	25,643,073	28,403,651	11	....
Passengers, Number	58,555	59,663	2	....
Coal:				
Hard, net tons.....	515,515	804,493	56	....
Soft, net tons.....	3,971,462	3,788,643	....	5
Flour, Barrels.....	6,760,688	7,634,350	13	....
Wheat, Bushels....	40,489,302	52,812,636	30	....
Grain, (other than Wheat) bushels...	16,174,659	24,760,547	53	....
Manufac'd Pig Iron, net tons.....	135,585	206,443	52	....
Salt, Barrels.....	328,895	443,774	35	....
Copper, net tons....	131,666	98,601	....	25
Iron Ore, net tons..	16,443,568	18,090,618	10	....
Lumber, M. ft. B. M.	909,651	1,072,124	18	....
Silver Ore, net tons..	110	....	....	....
Bldg. Stone, net tons	48,902	46,584	....	5
Gen'l Merchandise, net tons.....	541,397	558,041	3	....

The United States Canal was opened April 26 and closed December 11, 1901; season 230 days.

The Canadian Canal was opened April 20 and closed December 21, 1901; season 246 days.

Compiled at St. Mary's Falls Canal, Michigan under direction of Colonel G. J. Lydecker, Corps of Engineers, U. S. A. Joseph Ripley, Assistant Engineer and General Superintendent.

## THE RECORD OF AMERICAN AND FOREIGN SHIPPING FOR 1902.

The volume for 1902 of the Record of American and Foreign Shipping, which is the thirty-fourth annual issue of this valuable register and classification of shipping, is now being delivered to subscribers. The Record contains full reports and particulars of about 17,000 vessels of all classes and nationalities; rules for the construction and classification of steel, iron and wooden vessels; rules for the construction and survey of steam machinery and boilers for vessels; provisions for the installation of electric lighting and power apparatus on shipboard, and much other valuable information of special importance to underwriters and all firms or persons interested in shipping. Besides the usual information for the benefit of subscribers in the way of rules for construction with accompanying illustrations and tables—all of practical value—the work contains such features as list and addresses of prominent shipbuilders, dry-docks, marine railways, marine machinery and boiler constructors in the United States; list of vessels whose names have been changed; also compound names, indexed by the last name; names and addresses of owners of vessels classed in the Record. The work is approved and endorsed by the important Boards of Underwriters in the United States and is accepted by merchants and underwriters throughout the world as a standard register and classification of shipping. This excellent index has been thoroughly revised to date, and contains a large number of reports and classifications not included in previous issues. The new Record is published by the American Bureau of Shipping, No. 68 Beaver Street, New York.

## EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, reports the condition of the eastern freight market as follows:

Irrespective of the depressed condition of the freight market generally, the Christmas holidays are doubtless, to some extent, accountable for the small volume of business transacted this week. The year just expiring, can only be described, from an owner's point of view, as unsatisfactory, particularly the last six months, during which period freights have touched the lowest figures recorded for some considerable time.

The outlook for any material improvement within the near future is not very encouraging, but we are in hopes that the coming year will bring with it some relief to the general state of stagnation in shipping circles.

Cotton charterers do not show any anxiety to go ahead, preferring to go slowly on a "hand to mouth" basis.

Coal shippers are still suffering from the scarcity of car transportation, which prevents them from executing orders which might otherwise be feasible.

Sail tonnage meets with little attention and although we cannot note any particular change in rates, actual transactions in the various lines are required to establish the real state of the market.



**A CANADIAN MERCHANT MARINE.**

Some reasons why Canada should have her own fast Atlantic steamship service and why the country should be a factor in the building of steel vessels were emphasized by George H. Dobson, Secretary of the North Sydney, N. S., Board of Trade, who was in Toronto on a visit last week. Mr. Dobson had been in Montreal, looking into marine insurance rates there, and to the position that the Lloyds companies occupy, and in Toronto came in touch with the shipping interests, particularly as to the possibilities for ship building on the upper lakes.

In conversation with a representative of the Toronto Globe upon the proposed fast Atlantic line, Mr. Dobson remarked that Canada was too dependent on foreign countries in the important matter of transit. The period of dependence on foreign transportation, he thought, should end. Canada's growth had been retarded, and the country was losing by it. There was no longer any reason why we should use foreign channels and be dependent on foreign merchant navies for the despatch of our ocean mail service. "The establishment of Canadian ocean mail services on the lines of the great national mail services of Great Britain, France, Germany, Japan and other countries," Mr. Dobson remarked, "would in itself furnish a backbone for a Canadian merchant marine. The influence of those great merchant navies, the growth of which from the first has been by the use of liberal state aid to lines of home-built ships, has been far-reaching in promoting shipbuilding, employment, markets, national growth and prosperity in the respective countries.

"Considering the splendid results of the policies of those nations, and the growing need in Canada for similar employments and commercial expansion, we cannot too soon change our subsidy policy. We should begin the twentieth century where Great Britain began in the 'forties,' France in the 'fifties,' and Germany and Japan in the 'eighties,' of subsidizing only Canadian lines, and the development of a Canadian merchant marine would soon follow.

"It may be necessary, in addition to the mail subsidies, to adopt a system of graded bounties for a few years, owing to present conditions, but that will not long be required, from the fact that Canada can produce shipbuilding materials at the lowest cost. The reason why assistance in the way of bounties is needed at the beginning are: First, the expense of equipping the modern shipyard, and, secondly, the lack of immediate and pressing inducement to make the outlay by private individuals.

"The United States and other countries prohibit any foreign-built vessels sailing under a foreign flag from engaging in their coasting trade, and the new subsidy bills now being considered at Washington and Paris will exclude all foreign-built vessels from the benefit of state subsidies. In the Canadian coasting trade alone, which has increased from 14,000,000 to 34,000,000 tons in the past two decades, there is an inducement to encourage shipbuilding, if conserved to Canadians.

"The wise policy of other countries, coupled with the sound practice of governments ordering warships, etc., from private shipyards, has exerted a powerful influence in the development of shipbuilding industries abroad.

"Bounties are employed by France, Austria, Italy, and Japan, but the relatively small results of the system in those countries throw no light on the probable results of the system in Canada. The naval program of France employs about all of the shipbuilding resources of that nation; Italy pays import duty on coal, and imposes shipping taxes, and rapid as has been Japan's development, the complicated industries of modern shipbuilding are as yet young in that country.

"Canada stands well for primacy in shipbuilding. Her position can only be understood by a comparison of the cost of her pig iron the basic industry in steel shipbuilding, with that of other countries. With the development of the iron works at the Sydneys, Toronto and lake ports, Ontario, Quebec and the Maritime Provinces should regain their former prosperity in the shipbuilding industry. In regard to Quebec and the Atlantic ports, the Sydneys are most convenient for the distribution of products between St. John and Quebec at a mere nominal cost of transportation, only about 60 cents per ton, less than a quarter of the cost from most of the American and European furnaces to the seaboard, while the cost of production in the Sydneys is from 25 to 50 per cent lower than at the great shipbuilding centers of the world. The time is opportune, the conditions are favorable and the country greatly needs the upbuilding of our merchant marine.

"Our power to produce has grown so fast beyond our power to consume that the problem of a market for the continuous employment of operatives is already engaging the consideration of producers. The home market is limited from the comparatively small increase in population, only 25 per cent. in the last two decades, while the production has risen to over 100 per cent. during the same period.

"Rapid transit would enable us to divide ocean travel with New York. The revival of the shipbuilding industry would insure an increase of population, the merchant marine would enlarge the home and improve transportation to foreign markets. One great drawback has been in paying subsidies to foreign-built shipping, without any policy looking to purely national Canadian lines.

"No other country neglects its shipping industry as does Canada, and its encouragement is of equal, if not of greater importance, to the inland producing Provinces than to the seaboard communities. There should be no

delay on the part of our commercial and industrial associations in a united effort for the necessary legislation designed to promote national shipbuilding and modern transportation."

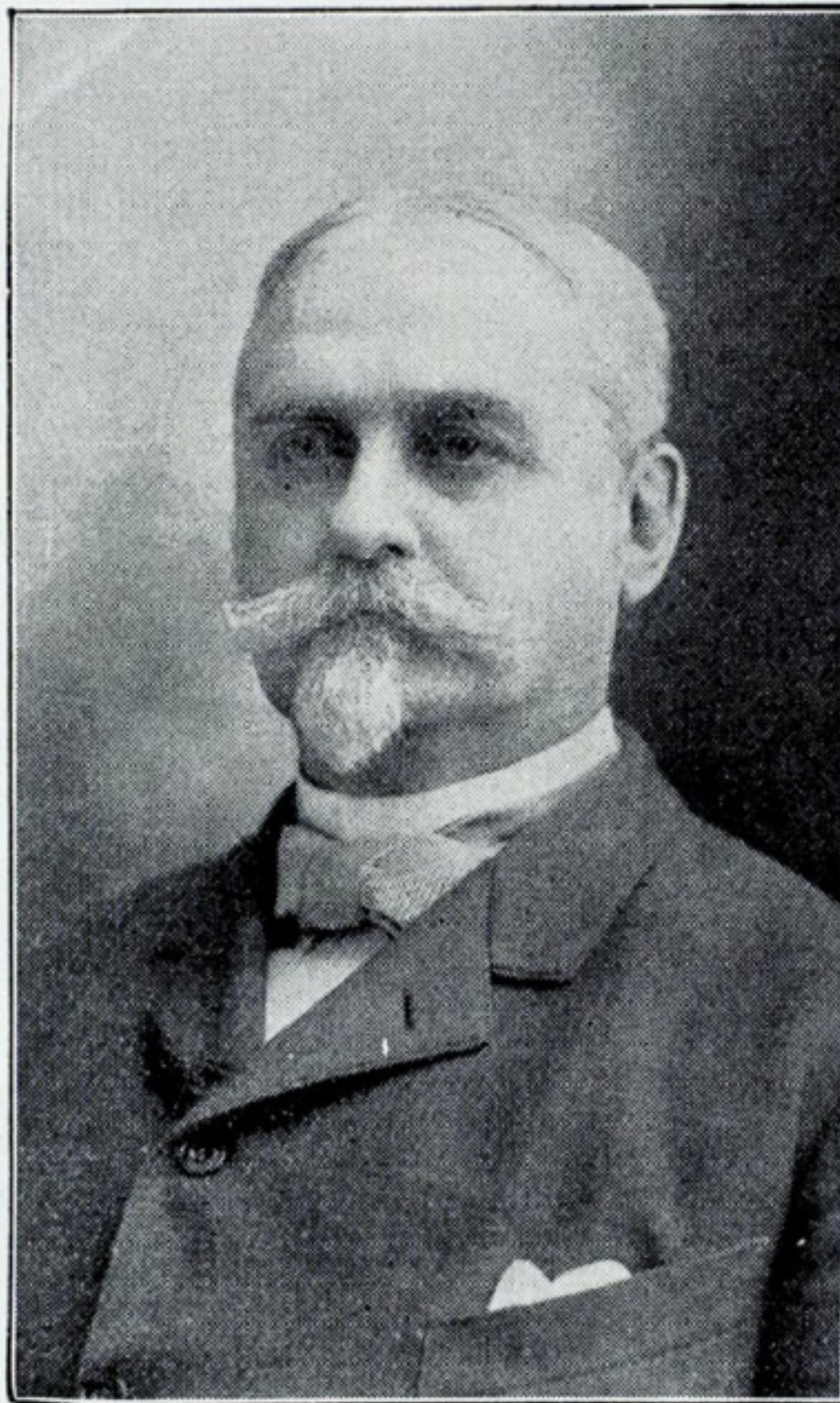
**CORPS OF ENGINEERS.**

Major Clinton B. Sears, C. E., in addition to his other duties is assigned to the command of the 2d Battalion of Engineers. (Dec. 23, H. Q. A.)

The following changes in the stations and duties of officers of the Corps of Engineers are ordered: Col. Garrett J. Lydecker will take station at Cincinnati, Ohio, not later than January 15, 1902, and relieve Lieutenant Colonel Thomas H. Handbury of his duties as division engineer of the Central Division, and Major William H. Bixby of the works in his charge, and for duty as engineer of the Fourteenth Light-House District, to relieve Major Bixby of that duty. Lieut. Col. Thomas H. Handbury will take station at San Francisco, Cal., and relieve Lieut. Col. Charles E. L. B. Davis not later than Feb. 1. Lieut. Col. Davis upon being relieved will proceed to Manila for duty as engineer officer on his staff and for duty as senior member of the board of officers appointed to consider the subject of the defense of the important harbors of the Philippine Islands, relieving Major Clinton B. Sears, of those duties. Major William H. Bixby upon being relieved will proceed to and take station at Detroit, Mich., and assume charge of the works in charge of Col. Garrett J. Lydecker. (Dec. 23, H. Q. A.)

**GAS LIGHTING BUOYS' COMPANY.**

At a meeting of the board of directors of the Safety Car Heating and Lighting Co., held at the office of the company, 106 Broadway, New York. Col. Robt. Andrews, heretofore the vice-president of the company, was elected to the presidency of the company, vice Arthur W. Soper, deceased. The vacancy in the board of directors was filled by the election of Mr. A. C. Soper to serve on the board. Mr. A. C. Soper is a brother of the late Arthur W. Soper.



COL ROBERT ANDREWS.

Col. Robt. Andrews is well known in railroad circles, and has a host of warm friends. He was born in Wilmington, Del. He attended school at the Episcopal Academy, at Cheshire, Conn., from which he was graduated in 1849. After leaving the Academy, he entered Trinity College at Hartford, where he was graduated in 1853. He then took a course in the Polytechnic College at Philadelphia, graduating in 1854. His first position was that of assistant engineer of the State Canals of Pennsylvania, in which capacity he served from 1854 to 1857, his next appointment being that of principal assistant engineer of the Sunbury and Erie railroad, and he served the company for the three years from 1857 to 1860. From 1861 to 1864 he was staff officer in the army during the civil war. From 1864 to 1865 he was chief engineer of the Saratoga & Hudson River railroad, and for the twenty years from 1865 to 1885 he served the Wabash railroad as division superintendent. From 1885 to 1888 he was general superintendent and engineer of the Virginia Midland railroad, and from 1889 to 1901 vice-president of the Safety Car Heating & Lighting Co., and the Pintsch Compressing Co. This brings his record up to the time of his election to the presidency of both the last named companies.

John B. Heckendorn has been appointed agent of the Canada-Atlantic line in Milwaukee, vice C. D. Howard, deceased. Mr. Heckendorn has been with the company for several years and since Mr. Howard's death has been acting agent. His appointment takes effect January 1.

**SHIPPING AND MARINE JUDICIAL DECISIONS.**

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

**Collision—Sailing Vessels Crossing—Review of Findings on Appeal.**—Findings of fact made by a court of admiralty, which were determinative of the question of fault for a collision at sea, between two sailing vessels, considered and affirmed on appeal. The Margaret B. Roper, 111 Fed. Rep. (U. S.) 623.

**Collision—Total Loss of Vessel—Measure of Damages.**—Where a vessel is sunk in collision, and damages are awarded the owner on the basis of her total loss, he is not entitled to recover in addition for the loss of earnings under an unexpired time charter. The George W. Roby, 111 Fed. Rep. (U. S.) 601.

**Failure to Maintain Lookout.**—To exonerate a vessel from fault for a collision where she failed to maintain a lookout, although she was navigating in a dense fog, and with knowledge that another vessel was approaching ahead, the burden rests heavily upon her to show that the presence of a lookout could not have guarded against the collision. The George W. Roby, 111 Fed. Rep. (U. S.) 601.

**Shipping—Limitation of Liability for Collision—Negligence of Master.**—A vessel owner is not to be deprived of the right to a limitation of liability for damages caused by collision, under Rev. St. Sec. 4283, for the misconduct of the officers or men of the vessel, to which he was not privy; and where a steamer was supplied with two watchmen, whose duty it was to serve as lookouts, the negligence of the master in failing to have a lookout properly stationed is not chargeable to the owners. The George W. Roby, 111 Fed. Rep. (U. S.) 601.

**Distribution of Damage Between Vessel and Cargo—Effects of Harter Act.**—The sole purpose of the Harter act is to modify the relations previously existing between the vessel and her cargo, arising from the contract of carriage; and the provision of section 3 exempting the owner from liability for faults or errors in navigation where his vessel was properly manned, supplied, and equipped does not affect the operation of the equitable rule, which gives priority to the claim of the innocent cargo owners over that of the vessel owner against the fund available for the payment of damages sustained through a collision for which both vessels have been adjudged in fault. The George W. Roby, 111 Fed. Rep. (U. S.) 601.

**Shipping—Demurrage—Extra Expense of Loading and Discharging.**—A steamer was chartered to carry a cargo of iron shot, "consisting of pieces averaging in weight about 100 pounds;" the cargo to be "received and delivered alongside of the vessel, where she can load and discharge always safely afloat, within reach of her tackles; and lighterage, if any, to be at the risk and expense of the cargo." It was also provided that the cargo should be furnished as fast as she could load the same, and that in discharging it should be received as fast as she could deliver it. The cargo furnished consisted of miscellaneous scrap iron; the pieces varying from small shot to cannon balls weighing 250 to 300 pounds, and broken beams and gun carriages weighing up to 1,600 pounds. She was unable to lie safely at the wharf where she was required to load, because of insufficient depth of water, and a considerable delay occurred in obtaining lighters. Delay was also caused in both loading and discharging by reason of the variation in the character of the cargo from that specified in the charter. Held, that her owners were entitled to demurrage at the charter rate for all delay so caused. McCaldin et al. vs. Cargo of Scrap Iron, 111 Fed. Rep. (U. S.) 411.

**Shipping—Charter Demising Ship for Term—Liability for Wrongful Act of Officers.**—By a time charter the owner agreed to let and hire to the charterer the whole of a steamship, with her tackle, apparel, furniture, etc., for the term of four months, at a stated rental, to be employed by the charterer between the port of Seattle and Alaskan ports. She was to be delivered to the charterer at Seattle in good order and repair, and re-delivered to the owner there at the end of the term in the same good condition, with certain exceptions of usual wear and tear and damages arising from sea perils and inevitable casualties. The charterer was to have "full charge of the vessel during the continuance of the charter party," to pay all bills and expenses incurred in her operation, including the wages of the master, officers, and crew; to protect her from all liabilities, and to have all her earnings of whatever description. The master, chief engineer, and steward were to be appointed by the owner, but "to be in all respects under the orders and direction of the charterer," and subject to removal on his complaint, if found to be justified. It was further provided that, in case the charterer should fail to pay the rental at the time specified, or the operating expenses, including wages, the owner should have the right to retake possession, and that on his request the master should hold possession of the ship as his representative. Held, that such charter constituted a demise of the vessel, which placed the charterer in possession, as owner, for the voyage made during the term, and that he could not hold the vessel liable by a proceeding in rem for loss or damages occasioned by the malfeasance or wrongful acts of the master or steward while so in his service. The Del Norte, 111 Fed. Rep. (U. S.) 542.





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CLEVELAND, O., JANUARY 2, 1902.

#### AN ADEQUATE NAVY.

At the launching of the battleship Missouri at Newport News, Va., on Saturday last, Hon. John D. Long, Secretary of the Navy, made an address in which he said:

"I have been interested in the circular signed by many eminent citizens, my friend E. E. Hale, at the head, in which they regret the estimate of \$100,000,000 for the increase of the navy. The size of the navy, if there is to be a navy at all, is a question like the tariff—of adjustment rather than of principle. Of course it is rather a taking thing to say as a matter of theory, as this circular says, that \$100,000,000 for the navy means a tax of \$6 on every family in the United States. And yet, on the other hand, as a matter of practical fact, if that sum is spent there is probably not a family in the United States whose future income could be shown to be \$6 less, and there are a good many families whose income would be \$6 more, and still more families whose income would be many times \$6 less if it were not spent. It is also rather a taking thing to say that \$100,000,000 could be better spent for education and charity. And yet, on the other hand, \$100,000,000 spent in the employment of labor is the very best use to which it can be put.

"The great question of the day, as to wealth, is its distribution. While few would say that the community should be taxed for the sole purpose of distributing the proceeds of taxation, yet it is some comfort to know of a tax which, when it is levied on the community, all returns again to it. If \$100,000,000 shall be appropriated for the navy by the present Congress, a small part will go for the purchase of raw material, and something for salaries, but the great bulk of it for labor in every part of the Union. Somehow it just now happens that with larger revenues than we have ever had before in times of peace, and therefore with more direct and indirect taxation, there is more prosperity and more money in the pocket of the citizen than ever before. Students may speculate over the economic causes, but this is the "demnition total."

Undoubtedly Uncle Sam ought to reduce taxation wherever he can. On the other hand, it is shrewd and wise in him to run things so as to keep business good; and if as a result his income is large he confers much more benefit by spending it than he would by hiding it. Whenever the interests of the country require, he should reduce his receipts, but as they are now excessive, the great question seems to be how he shall get the proceeds back among the people. Another year he may not have so much money to spend. But if this year, having a surplus,

he spends \$100,000,000 for the navy, let us remember that while it is spent under the name, it is really spent, as I said before, in the employment of the people's labor and in the purchase of the material they have to sell, and the people get rather more out of it than the navy does, for they get it all back again.

"Nor is it true as suggested in the circular that a great navy necessarily inflames the fighting spirit, and leads to war. If my recollection serves me right, while Great Britain has had troubles in Egypt and Africa and elsewhere, she has had no conflict on sea for many years, and yet her navy has been twice as large as that of any other power. The recent increase in our navy did not induce the war with Spain, which, as things were, seems to have been inevitable. On the other hand it is more than likely that if in the beginning of 1898 we had even as large a navy as we have now, certainly as large a one as now proposed, there would have been no war with Spain, and that country would have come to terms, as she was very near coming without battle. At that time, however, it was the general impression among foreign powers, and probably in Spain, that her navy would blow us out of the water.

All the foregoing details with questions of expediency, which are the only questions raised in the circular. But this is a question of principle, and that question strangely enough, the circular does not touch. The signers, it seems to me, instead of raising the question of how big the navy should be, should have raised the question of whether there shall be any navy at all. This I do not propose to argue, as until the world moves much farther towards the millennium, it is hardly worth while to argue it.

In determining the question what shall be the size of our navy, there are a great many things to be considered, some of which I have referred to.

For instance, our world relations have expanded vastly in the last three years in territorial extent, and vastly more in international extent upon the continent, but upon the ocean itself and the islands of the sea in both hemispheres. Our commerce has greatly increased in volume and area, and our American marine is likely to follow suit; as on land, so on ocean, as you extend your commerce so you must expand your police force. If there is to be a navy at all it should be commensurate with all these extended relations and demands. We are the richest nation of the world, with a larger income than any other. If then the size of our navy should correspond to our national and international size, and if we have the cash on hand, it would seem the simplest good business sense, the simplest good business care of our own interests, to increase the navy, and whether this shall cost \$20,000,000 or \$75,000,000 or \$100,000,000, it is not an extravagance to cut our garment according to our cloth, especially as last year there was no appropriation for such an increase. It is like the rich man grading his expenditures to his income, and thus making it serve the general welfare, as well as his own. It is like having police enough instead of having a number so limited that the roughs are tempted to riot. There certainly is a heap of comfort in feeling that if millions are now spent for the navy, the money is in the till to spend. It is a case where the people can have their cake and eat it, too; they can have their ships, and they can have in their pockets the money paid for building them.

I will not pursue the topic further, but a United States naval vessel carrying our flag into the ports and harbors of the world is something more than a fighting machine. It means relations with those ports; it means an awakening and lively respect there for our country; it means recognition of the outreach of our civilization, commerce and influence; it means just what would be meant if a fine representative of New York or Boston, carrying her prestige, exploiting her interests, were in every other city of the Union."

Shipping—Proceedings for Limitation of Liability—Interest on Bond for Release of Vessel.—Where the owners of a vessel, in proceedings for limitation of their liability for a collision, gave bond conditioned for the payment into court on its order of the appraised value of the vessel "and the interest on the same as provided by law," and thereafter contested their liability, the result being an award against the vessel exceeding its value, the stipulators are liable for the interest on the bond from the date of its execution at the legal rate. The George W. Roby, 111 Fed. Rep. (U. S.) 601.

#### INCIDENTS IN AMERICAN TRADE ABROAD.

Punta Arenas in Tierra del Fuego is the southernmost continental spot on the globe, but the modern light house on the lonely coast is equipped with electrical machinery made in Schenectady, N. Y. The firm that manufactured it has also pushed electricity farthest north by installing dynamos at Hammerfest, in Norway, and, though it is a far cry from the deepest drifts of the Calumet and Hecla mine to Yanteles, in the Andes, 14,000 feet above the sea, two consignments recently left Schenectady, one for the deep mine, the other for the mountain.

By the very bedside of the Pope is placed every night an American flashlight apparatus in the form of a cylinder with an incandescent bulb in one end—in effect an electric candle. At Bagdad, Aladdin has been replaced by a New York concern. Lamps of fanciful patterns are sent from New York to a point on the Persian Gulf, and thence conveyed over some 300 miles of desert on camel back. They are then placed on rafts and towed 100 miles up the Euphrates, and again loaded on camels and carried to their destination 200 miles from the river. These lamps decorate the palaces of the Sultan of Morocco, the Prince of Siam and several rajahs in British India; and they are also popular in Jerusalem.

From the Falls of Couvery, one of the sacred rivers of India, to Kolar in Mysore American electrical engineers have recently set up an American transmission plant under somewhat remarkable circumstances. There are still wild elephants in Mysore, and there will always be white ants. But as a white ant will venture not more than five or six feet up a pole in search of edible wood, the steamer from New York carried out to India iron post-sockets seven feet high in which to set the poles—to the discomfiture of the ants. To disconcert the elephants and prevent the grounding of the current through any behemoth that might venture to test the wires with his trunk, the engineers, after careful measurements, strung the wires just beyond reach of the biggest possible elephant standing on hind legs and groping—The World's Work.

#### NOTICE TO MARINERS.

DOMINION OF CANADA, ONTARIO.

I. MIDLAND RANGE LIGHTS.

Two range lights, established by the government of Canada in the town of Midland, Georgian Bay, Ontario, were put in operation for the first time on the 21st of November, 1901.

The lights are fixed red incandescent electric lights shown from lamps on electric light poles, on the hill in the southwest part of the town.

The front light is elevated 30 feet above the ground, and 150 feet above the water level of the harbor. The front pole stands on the hillside, 100 feet north of Ottawa street, between Seventh and Eighth streets.

Lat. N. 44 deg., 44 min., 58 sec.

Long. W. 79 deg., 53 min., 56 sec.

The back range light stands on Ottawa street 1,320 feet south, 56 degrees west, from the front light. The light is elevated 30 feet above the ground and 190 feet above the water level of the harbor. The two lights in one, bearing south, 56 degrees west, lead in from Midland point up to the wharves in the harbor, clear to the southeastward of Midland Bay shoal.

F. GOURDEAU,

Deputy Minister of Marine and Fisheries.

DEPARTMENT OF MARINE AND FISHERIES.

OTTAWA, CANADA, 14th December, 1901.

#### THE WINTER FLEET AT TOLEDO.

The Toledo winter fleet consists of forty-two vessels, as follows: Steamers—Aztec, Russel Sage, John C. Gault, James Fiske, Jr., Vega, Preston, Gettysburg, J. H. Outhwaite, S. C. Reynolds, Rube Richards, John E. Hall, John N. Glidden, Thomas C. Christie, Sachem, C. Hickox, Miami, Iroquois, Pastime, American Eagle. Schooners and barges—Arthur, John Miner, John Schuette, Chipewa, Saveland, H. H. Badger, Miztec, William Brake, C. G. King, J. T. Johnson, A. Gebhardt, C. C. Barnes, Polynesia, May Richards, J. I. Case, Emma C. Hutchinson, Sunshine, H. C. Sprague, John R. Noyes, Abram Smith, George B. Owen, Yukon.

We are in receipt of a handsome calendar from the Ashton Valve Co., manufacturers of the Ashton "pop" safety valves, at Boston, Mass. The picture which surmounts it—"La Mademoiselle"—is one that will be pleasing to all who receive it.



## LETTERS AT DETROIT MARINE POST OFFICE.

DECEMBER 25, 1901.

To get any of these letters, addresses or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of his list and paying one cent.

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 Arenson Ed, Flint  
 Andrews David, Brazil  
 Armstrong Guy-2, Harv. rd  
 Aubertin Geo, Caledonia  
 Andrews W E, Corona  
 Allen W F, Empire City  
 Adamson E E, Alaska  
 Ameel Emil, Steinhennner  
 Anderson Capt S, Martin  
 Anchor Norman, Omaha  
 Belting Ray, Presque Isle  
 Boyle Thos-2, Yosemite  
 Barton Wm A, Law  
 Brion Thos, J E Ower  
 Bell Don, St Louis  
 Brown Verne, Stimson  
 Bernard Frank, Palmer  
 Byrnes Thos, Paisley  
 Bockmiller F A-3, Marina  
 Brown A S, Maricopa  
 Bradbury Hugh, Melbourne  
 Barry W J, Muskoka  
 Bennett R D, Monkshaven  
 Brown V, Argo  
 Brickley J A, Kelley  
 Brown S S, Abercorn  
 Briggs Lewis, Ketcham  
 Bigger Mrs A, Eureka  
 Bigger Mr A, Eureka  
 Basney Elmer, Admiral  
 Biezn John, Averill  
 Bennett Jno D, Cadillac  
 Brown Robt, Cumberland  
 Burns Thos J, Columbia  
 Bauer H S, Hanna  
 Blair Ben-2, Reynolds  
 Baker Henry, Reynolds  
 Belcours Jas, H H Brown  
 Brown Wendell, Bunsen  
 Brown Jno J, H Brown  
 Baker Wm, Bunsen  
 Barklund Jno, Uranus  
 Bannon Henry, Fulton  
 Bender Willie, Manistique  
 Bellangy Jerry, Wright  
 Brandt Ole, Wotan  
 Barney Geo,  
 Barney Wm, Neilson  
 Bourne J E, Jupiter  
 Bennett Chas W  
 Bernard E F  
 Courtney Jno, Wilson  
 Carter L, Sacramento  
 Curran Mrs A E  
 Crimo E W  
 Cater J B, Concord  
 Cote David, Yukon  
 Cotter Chas W, Leland  
 Crich E J, Pathfinder  
 Campbell Walter, Wolian  
 Carr Jno, Williams  
 Chambers Alfred, Wyoming  
 Clark W R Wawan  
 Corsant R M, Tacoma  
 Coleman J H Penobscot  
 Chorkey A, Bendall  
 Carpenter Fred, Pasadena  
 Cowan Wm H, Panther  
 Carpenter S W, New York  
 Clark Jno W, Sacramento  
 Corigan P, Selkirk  
 Christian Wm, Sunshine  
 Cimus Emil, Nimick  
 Carmer Joe, Rhodes  
 Church J H, Johnson  
 Crawford J M, Davidson  
 Carson Wm, Delaware  
 Cash Fred E-2, Bessemer  
 Cruickshank W E, Brainard  
 Cameron Jno, Barnes  
 Campbell Ross, Rees  
 Cogswell B, Queen City  
 Copeling Edw, Harlem  
 Conlen Jas-2, Hill  
 Campbell Wm H, Gates  
 Gallagher Jas, Cuba  
 Carrick F, Crescent City  
 Clegg H, Crescent City  
 Courtney W, Argonaut  
 Courtney Jno, Andaste  
 Christie Capt A, C G King  
 Cumming R, Kirby  
 Carthwright P M, Kirby  
 Delepanie S S, Presque Isle  
 Duncan Vernie, Miami

Dodge W H, Point Abino  
 Davis Chas, J F Eddy  
 Donoghue Jos, Cuba  
 Dorrance O A, Maize  
 Dennis Geo R-2, Glasgow  
 Dell Albert, Hebard  
 Darsey Paul, Brazil  
 Duffy Frank, McDougall  
 David A P, Marina  
 Drullard Mrs, Matanzas  
 Definbaugh Mr, Groh  
 Dahlstrom S E, Matanzas  
 Delaney S, Presque Isle  
 Deutschman Wm-2, Pabst  
 Dundas Wm, Panther  
 Dove Jas, Norton  
 Danis F W, Nicholas  
 Dupuie J E-2, Saturn  
 Derush Mike, Seneca  
 Doyle P, Swain  
 Downing W J, Orinoco  
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 Dawson D J, Russell  
 Eger W W, Elphicke  
 Edwards P H, Dunbar  
 Ehrhardt Jno, Zenith City  
 Eber F J, Saxon  
 Edwards Wm, Dunbar  
 Elsey W G, Nimick  
 Eiland Harry, Pueblo  
 Edwards Gilbert, Columbia  
 Evans Dottie, Hiawatha  
 Furman Dan, Yakima  
 Farmer Roland, Sitka  
 Findley G W, Nimick  
 Folson Robt, Pratt  
 Finegan O P, G W Peavey  
 Facenff H, Pueblo  
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 Foster Jno A, J F Eddy  
 Fountain A, Aurora  
 Forslund Chas, Corliss  
 Fleming Geo, Corona  
 Fitzgerald Fred, Case  
 Fulton G J, Massachusetts  
 Ferguson Arch, Devereaux  
 Green Geo-3, Homer  
 Goodrich C M, Embury  
 Greiner Fred,  
 Ganan J H, Planet  
 Greene Alvin, Nicholas  
 Grandee A M, Melbourne  
 Graham H B, Pathfinder  
 Gilroy Lee, Linn  
 Gutch Paul, Yakima  
 Gatecliff R, Orton  
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 Gilbertson G, Saveland  
 Gaskin R A, Shenandoah  
 Ginman Chas, Nicholas  
 Gallarno J A, Wyoming  
 Gey Otto, Frick  
 Gardel Gust, Iron Duke  
 Grant Chas, Cartagena  
 Gray Jno F, Colby  
 Grashaw W-2, Edenborn  
 Gibson Norman, Brazil  
 Gilbert Jim, Miami  
 Ganquish Hugo, Laura  
 Goodwin Frank, Kennebec  
 Grandee Arch-2, Melbourne  
 Harmon Fred, Wilson  
 Herrick Henry  
 Hull Chas T, Juniata  
 Hopkins Geo, Edenborn  
 Howell Annie  
 Holt May, Hopkins  
 Hill A B, Saturn  
 Horning Carrie-2, Pretoria  
 Hill Fred, Reynolds  
 Hansen J T, Street  
 Halmen Chas, Palmer  
 Halleran Jno, Peshtigo  
 Hansen Jno, Tampa  
 Hannah R S, Tuttle  
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 Harris R D, Gould  
 Hitchcox L J-2, Elphicke  
 Harris R L, Adams  
 Hill A D, Carnegie  
 Handy Geo, Grover  
 Harland Stanley, Hill  
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 Hemenger Frank, Huron  
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Hartney Jno, Blaine  
 Hurley Thos, Bulgaria  
 Hawthorn Frank, Uranus  
 Handle Carrie, Godfrey  
 Ireland J A, Adams  
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 McLeod M, Phenix  
 McGeon M, W K Moore  
 McCarty Jas, Empire City  
 McRae M, W Elphicke  
 McDonald T J-3, Sup. City  
 McGrath D P, Roman  
 McGraw O J, Caledonia  
 MacDonald R, Codorus  
 McRae Jno, 129  
 McPhee Neil, Zillah  
 McKinney J, Yosemite  
 McCauley R, Yakima  
 McCauley Pat-3, Yakima  
 McDargh G, Manda  
 McLeod A, Holden  
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 Nod Jos, Gates  
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 Neville Wm-2, Elphicke  
 Nall G F-3, Edenlorn  
 Nugent J, Macey  
 Nathan D, Wall  
 Nelson G, Yakima  
 Nielson Andrew, Landon  
 Ottis P, Whitaker  
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 O'Flinn J, Amazon  
 O'Donnell J, Ellwood  
 Oles W, St Louis  
 O'Shea D J, Leafield  
 Owen Jas,  
 Olmstead J, Wilson  
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 Pipher Annie,  
 Phelps G H, Hopkins  
 Paut E F, Pabst  
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 Palmer E, Sitka  
 Peterson J, Omaha  
 Pennoyer C L, Yuma  
 Platts M O, Huron  
 Parsons G B, Gates  
 Palmer C W-2, CrescentCity  
 Phelps F, Parsons  
 Price Blanche-2, Magee  
 Pease D, Masaba  
 Patey Geo-2, Majestic  
 Perry D A, Mannaola  
 Pentzien C, Richards  
 Payne J A-2, Newaygo  
 Pederson J O,  
 Parde Frank  
 Pouget J, Mecosta  
 Perene J C, J D Marshall  
 Rourke J, Mitchell  
 Rattray W P-2, Maine  
 Rogers Ed, Wade  
 Robison H, Mataafa  
 Renwand A, Abercorn  
 Ringer G, Edwards  
 Rosman M, Elphicke  
 Reiter P, Choctaw  
 Raplee H G, Cuba  
 Rice Gussie, Case  
 Roshman H, Corsica  
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 Rolfson H, Harlan  
 Rattray R, Hanna  
 Ross R, Bacon  
 Reynolds J, Bissell  
 Richards L, Viking  
 Randle D, Fleetwood  
 Rivard A P, Bartlett  
 Reardon W J, Pueblo  
 Rabshaw J, Mack  
 Roberson G E, Tilden  
 Ross Jas, Williams  
 Rowan R, Mahoning  
 Siprelle C D-2, Naples  
 Sleno L, Graveler  
 Steinhoff T,  
 Stubbins F, Marie  
 Schroder G F, Tuttle  
 Shier D R, Hill  
 Shornar Wm, Huron  
 Shomp A, Hopkins  
 Shade Jno, Hoyt  
 Shoup H, Hopkins  
 Sharrow A, Bottsford  
 Schroeder F, Bl Rock  
 Silerthorn P A-2, Columbia  
 Showers L, Hall  
 Seldon H D, Codorus  
 Smith W, Codorus  
 Stephen E L, Codorus  
 Stufflebeam W, Corsica  
 Scott Ch, Cartagena  
 Shatton J W, Carnegie

Stevenson O, Alaska  
 Stabin F, Choctaw  
 Smith Joe, Choctaw  
 Stoddard Ed, Edenborn  
 Schwat Chas, Dunbar  
 Schroder G F-2, Tuttle  
 Simmons C, Davidson  
 Stoebe C-2, Spokane  
 Smith L V, Spokane  
 Shean B, Oneonta  
 Stringer B, Orinoco  
 Schoeneman F, German  
 Shoreland C W,  
 Sparling Wm C-2, Sparta  
 Shackett P, Schuck  
 Shampine T, Tilden  
 Shaw C A, Pendall  
 Stalker W E,  
 Scott R, Paris  
 Spaulding H W, Pawnee  
 Sipes C, Orleans  
 Stewart G W, Pratt  
 Stimson E E, Wolvin  
 Smith Wm, Vail  
 Sullivan D, Iron Duke  
 Sykes C R, Manhattan  
 Smith U, Madeira  
 Simon H, Macey  
 Strauss F M, Pathfinder  
 Shaffer J H, Leland  
 Stackwell J, Kearsarge  
 Sheehan R, Leafield  
 Suncrante H-2, Lewiston  
 Scott Wm, Yakima  
 Sullivan B, Kaliyuga  
 Tebo Alfred, Keith  
 Thorne G, La Salle  
 Townsend M B, St Louis  
 Teal Ida, Atmosphere  
 Turk L R, Yakima  
 Taylor Hm, Marina  
 Trapnell W, Mouwatt  
 Thompson Mrs Mathilde,  
 McLachlan  
 Trombley Anna, Gould  
 Teichon J, Scott  
 Thibodeau A D, Edenborn  
 Taylor J A, Elphicke  
 Titus Frank, Columbian  
 Taylor Jas, Huron  
 Tinsler W, Raleigh

Thrasher C-2, Iron Duke  
 Thompson A H, Wyoming  
 Townsend M, Wolvin  
 Thisler John, Lackawanna  
 Venice H, Tempest  
 Vaughn W H, Gates  
 Vohris Mary, Wilson  
 Van Buskirk J, Iron King  
 Vanidow Ray, Brown  
 Vigneux S, Brown  
 Van Stan R-3, Atmosphere  
 Waukeim O L,  
 Will H A  
 Wilson Jas  
 Wineland John  
 Wood Tom  
 Willis H  
 Wiesland Ernest  
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 Wellman J B, Maine  
 Wall E E, Kennebec  
 Wetmore D, Scott  
 Wescott J W, Carnegie  
 Wagner P, Clidden  
 Williams P, Hill  
 Williamson P T, Hill  
 Williams C P, Brightie  
 Williams H, Iron King  
 Washington F T, Venice  
 Warner L, Wyoming  
 Yail R, Neosho  
 Young W T, Minch  
 Young J-2, Perew  
 Young B, Mannaola  
 Zastrow A, Mather  
 Zeegenhagen H, Palmer  
 F. B. DICKERSON, P. M.

## MARINE PATENTS.

688,398. Means for altering the trim of marine craft. W. A. Dodge, Fall River, Mass.  
 688,607. Vessel sounding rod. W. H. Dixon, Chicago, Illinois.  
 688,758. Port light for marine craft. R. J. Victor, Arlington, N. J.  
 689,431. Device for raising sunken vessels. R. Tattu, Trenton, N. J.  
 689,648. Sail. G. A. Lowry, Chicago, Illinois.  
 689,741. Vessel for transporting granular substances. A. McDougall, Duluth, Minn.  
 689,782. Vessel. W. Blanchard, Scranton, Miss.  
 689,821. Hull construction. C. H. Howland-Sherman, Washington, D. C.; assignor of 1/4 to G. H. Howard, Washington, D. C., and S. G. B. Cook, London, England.  
 688,847. Rudder brake. J. S. W. Grenfell, Hartland, England.  
 689,145. Engine for steering vessels. F. B. Turner, Vancouver, Canada.  
 687,241. Motor for propelling boats. John F. Kerns, Buffalo, N. Y.  
 687,325. Screw-propeller. James B. Macduff, Brooklyn, N. Y.  
 687,638. Ventilating apparatus for life-boats. James Nain, Liverpool, England.  
 687,910. Construction of vessels. John S. Watters, New Orleans, La.  
 687,933. Means for operating bulk-head doors. Carl T. Dorr, Ohligs, Germany.  
 688,290. Apparatus for unloading coal. Alexander E. Brown, Cleveland, Ohio, assignor to Brown Hoisting Machinery Co., a corporation of Delaware.  
 688,338. Hydraulic dredging apparatus. Elton Risley, Pleasantville, N. J.  
 688,630. Rope clamp. James B. Stone, Worcester, Mass.  
 688,398. Means for altering the trim of marine craft. William A. Dodge, Fall River, Mass.  
 688,607. Vessel sounding rod. William H. Dixon, Chicago, Illinois.  
 688,643. Self feathering paddle wheel. David W. Horton, Petersburg, Ind.  
 688,672. Marine vessel. William Niemeyer, St. Joseph, Mo.  
 688,692. Means for propelling ships. Richard Richares, Midway, Kans.  
 688,758. Port light for marine craft. Robert J. Victor, Arlington, N. J.  
 Design 35,435. Propeller. Edward E. Strothman, West Superior, Wis. Term of patent 14 years.  
 689,085. Swimming device. Byron J. Hopper, Portland, Oregon.  
 689,090. Block. Lafayette W. Johnson, Jerome, Ariz., assignor of one-third to Frank C. Clark, same place.





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### THE SUBSIDY BILL.

The full text of the Frye subsidy bill, read twice and now in the hands of the Committee on Commerce is as follows:

"The Postmaster-General is hereby authorized and directed to enter into contracts, for a term not less than five nor more than fifteen years' in duration, with American citizens for the carrying of mails on American steamships between ports of the United States and such ports in foreign countries, the Dominion of Canada excepted, as in his judgment, having regard to the national defense, will best subserve and promote the postal, commercial, and maritime interests of the United States; the mail service on such lines to be equitably distributed among the Atlantic, Mexican Gulf, and Pacific ports. Said contracts shall be made with the lowest responsible bidder for the performance of said service on each route, and the Postmaster-General shall have the right to reject all bids not in his opinion reasonable for the attaining of the purposes named."

Sec. 2. That section three of the Act aforesaid be, and the same is hereby, amended to read:

"Sec. 3. That the vessels employed in the mail service under the provision of this act shall be American-built steamships, owned and officered by American citizens, in conformity with the existing laws, or so owned and officered and registered according to law; and upon each departure from the United States the following proportion of the crew shall be citizens of the United States, to wit: During the first two years of such contract for carrying the mails, one-fourth thereof; during the next three succeeding years, one-third thereof, and during the remaining time of the continuance of such contract, at least one-half thereof; and shall be constructed after the latest and most approved types, with all the modern improvements and appliances for ocean steamers. They shall be steel-screw steamships, and divided into the following classes according to gross registered tonnage and capacity to maintain at sea in ordinary weather the following speeds:

"Over ten thousand tons:

"First class, twenty knots or over.

"Second class, nineteen knots and less than twenty knots.

"Over five thousand tons:

"Third class, eighteen knots or over.

"Fourth class, seventeen knots and less than eighteen knots.

"Fifth class, sixteen knots and less than seventeen knots.

"Sixth class, fifteen knots and less than sixteen knots.

"Over two thousand tons:

"Seventh class, fourteen knots or over.

"It shall be stipulated in the contract or contracts to be entered into for the said mail service that said vessels may carry passengers with their baggage, in addition to said mails, and may do all ordinary business done by steamships."

Sec. 3. That section four of the Act aforesaid be, and hereby is, amended to read as follows:

"Sec. 4. That all steamships of the first, second, third, fourth, and fifth classes, employed as above and hereafter built, shall be constructed with particular reference to prompt and economical conversion into auxiliary naval cruisers, and according to plans and specifications to be agreed upon by and between the owners and the Secretary of the Navy; and they shall be of sufficient strength and stability to carry and sustain the working and operation of at least four effective rifled cannon of a caliber of not less than six inches, and shall be of the highest rating known to maritime commerce. And all vessels of said five classes heretofore built and so employed shall, before they are accepted for the mail service herein provided for, be thoroughly inspected by a competent naval officer or constructor detailed for that service by the Secretary of the Navy; and such officers shall report, in writing, to the Secretary of the Navy, who shall transmit said report to the Postmaster-General; and no such vessel not approved by the Secretary of the Navy as suitable for the service

required, shall be employed by the Postmaster-General as provided for in this Act.

Sec. 4. That section five of the aforesaid Act be, and is hereby, amended to read:

"Sec. 5. The rate of compensation for such ocean mail service, to be paid per gross registered ton for each one hundred nautical miles sailed from the port of clearance in the United States to the port of entry in the United States, according to the route required by the Post Office Department, shall not exceed the following:

"Steamships of the first class, two and seven-tenths cents.

"Steamships of the second class, two and five-tenths cents.

"Steamships of the third class, two and three-tenths cents.

"Steamships of the fourth class, two and one-tenth cents.

"Steamships of the fifth class, one and nine-tenths cents.

"Steamships of the sixth class, one and seven-tenths cents.

"Steamships of the seventh class, one and five-tenths cents.

"The rates of compensation to a steamship to be employed in carrying the mails to a foreign port in North America under any contract hereafter to be made under the provisions of this Act shall not exceed seventy per centum of the maximum rates established by this section: Provided, That in the case of failure from any cause to perform the regular voyages stipulated for in said contracts, or any of them, a pro rata deduction shall be made from the compensation on account of such omitted voyage or voyages, and that suitable fines and penalties may be imposed for delays or irregularities in the due performance of service according to the contract, to be determined by the Postmaster-General: Provided further: That no steamships so employed and so paid for carrying the United States mail shall receive any other bounty or subsidy from the Treasury of the United States."

Sec. 5. That section eight of the act aforesaid be, and the same is hereby, amended to read:

"Sec. 8. Such vessels shall take, as cadets or apprentices, one American-born boy, under twenty-one years of age for each one thousand tons gross register, and one for each majority fraction thereof, who shall be educated in the duties of seamanship, or engineering rank as petty officers, and receive such pay for their services as may be reasonable."

### TITLE II.

#### GENERAL SUBSIDY.

Sec. 6. That from and after the first day of July, nineteen hundred and two, the Secretary of the Treasury is hereby authorized and directed to pay, subject to the provisions of this title, out of any money in the Treasury not otherwise appropriated, to the owner or owners of any vessel of the United States duly registered by a citizen or citizens of the United States (including as such citizens any corporation created under the laws of the United States or any of the States thereof), and being at the time of entry engaged in the foreign trade of the United States, which shall be entered in the United States from a foreign port or from any port in the Philippine Islands, compensation as hereinafter provided, that is to say:

(a) On each entry, not exceeding sixteen entries in any one fiscal year, of a sail or steam vessel, one cent per gross registered ton for each one hundred nautical miles sailed.

(b) On each entry, not exceeding sixteen entries in any one fiscal year, and for a period of five years from the date of registration of a vessel of over one thousand gross registered tons, which shall be completed and registered after the passage of this Act, one-fourth of one cent per gross registered ton for each one hundred nautical miles sailed, in addition to the compensation provided in paragraph (a).

Sec. 7. That compensation under this title shall not be allowed in respect of any of the following-named vessels:

(a) A vessel on a voyage extending only to a foreign port less than one hundred and fifty nautical miles from her last port of departure in the United States or from a foreign port less than one hundred and fifty nautical miles from her first port of arrival in the United States.

(b) A vessel on a voyage less than one-half of the whole length of which, on her outward and homeward voyages, respectively, shall have been on the sea between a port of the United States and a foreign port.

(c) A vessel which shall not be at least of the class A1, as classified either by the Record of American and Foreign Shipping or the United States Standard Owners, Builders, and Underwriters' Association, or equivalent classification in any other register of shipping of at least equal merit.

(d) A vessel of which less than one-fourth of the crew shall be citizens of the United States or such persons as shall be within the provisions of section twenty-one hundred and seventy-four of Revised Statutes.

(e) A barge, canal boat, or vessel without motive power of its own, or a tugboat, or a vessel engaged in wrecking.

(f) A foreign-built vessel, hereafter admitted to American registry pursuant to the provisions of section forty-one hundred and thirty-six of the Revised Statutes.

(g) A vessel while employed in the coasting trade.

Sec. 8. That the mileage upon which compensation shall be paid under this title shall be determined by the direct customary route from the last port of departure in the United States to a foreign port or a port in the Philippine Islands, and from such last-mentioned port by the direct customary route to the first port of arrival in the United States. If during the voyage the vessel shall enter at two or more foreign ports or ports in the Philippine Islands, the distance by the direct customary route between such ports shall also be included in the mileage upon which compensation shall be paid under this title.

Sec. 9. That any vessel, before receiving compensation under this title, shall have carried, free of charge, the mails of the United States, if the Postmaster-General shall have so required, for the whole or any part of a voyage for which compensation shall be claimed.

Sec. 10. That any vessel, before receiving compensation under this title, shall, when required so to do by the Secretary of the Treasury, carry on each foreign voyage, as a member of the ship's company, one American boy, under twenty-one years of age and suitable for such employment, and one such boy in addition for each one thousand gross registered tons, who shall be taught in the duties of seamanship or engineering, or other maritime knowledge, as the case may be, respectively, and receive such pay as shall be reasonable.

Sec. 11. That the owner of any vessel, before receiving compensation pursuant to this title, shall agree, in writing, that said vessel may be taken or employed and used by the United States for the national defense or for any public purpose at any time; and in every such case the owner of any such vessel so taken or employed shall be paid the fair value thereof, if taken, at the time of the taking; and if employed, shall be paid the fair value of such use. And if there shall be a disagreement as to such fair value the question of the valuation shall be submitted to and determined by three impartial appraisers, one to be appointed by the Secretary of the Treasury, one by the owner or owners of the vessel, and the two appraisers so appointed shall, before they proceed to act, select a third appraiser. The decision of a majority of such board shall be final and effective. In case of any taking or employment, as provided in this section, the shipping obligations of the officers and crews existing at the time shall be deemed to have terminated.

### TITLE III.

#### DEEP-SEA FISHERIES.

Sec. 12. That from and after the first day of July, nineteen hundred and two, the Secretary of the Treasury is hereby authorized and directed to pay, out of any money in the Treasury not otherwise appropriated, bounties as follows:

(a.) To the owner or owners of a documented vessel of the United States engaged in the deep-sea fisheries for



at least three months in any one fiscal year, two dollars per gross ton per annum: Provided, That at least one-third of the crew shall be citizens of the United States, or such persons as shall be within the provisions of section twenty-one hundred and seventy-four of the Revised Statutes.

(b.) To a citizen of the United States serving as a member of a necessary and proper crew of a vessel of the United States documented and engaged in deep-sea fisheries for at least three months during any one fiscal year, one dollar per month during the time necessarily employed in the v. ages of such vessel.

#### TITLE IV.

##### GENERAL PROVISIONS.

Sec. 13. That a vessel shall not be entitled to compensation under two or more titles of this Act at the same time.

Sec. 14. That a vessel which has at any time received compensation pursuant to any of the provisions of this Act shall not be sold, except by the consent of the Secretary of the Treasury, to a citizen or subject of a foreign power, under penalty of forfeiture.

Sec. 15. That the President of the United States shall from time to time cause to be made, by the proper heads of departments, regulations for the due execution of the provisions of this Act.

#### \* NOT RESPONSIBLE FOR STOWAWAYS.

A decision of interest to shipping men was handed down by Judge Hanford in the United States Court at Tacoma recently, defining the attitude and responsibility of a ship in relation to stowaways. The case decided was that of Doctors J. William Scammel and G. W. Overmeyer, of Aberdeen, Wash., who libeled the schooner Laura Madsen to enforce payment for their services as physicians in treating a stowaway who was injured on board the schooner.

Judge Hanford finds for the schooner and dismissed the suit at the cost of the libelants.

In its decision, the court states that the schooner was employed in the lumber trade between Gray's Harbor and San Diego when one day at sea on a return voyage from San Diego, a stowaway was discovered aboard. The captain required the stowaway to sign the ship's articles to serve as a member of the crew to the end of the voyage and he was marked on the articles as a stowaway. He was not required to do a seaman's work, but was willing to lend a helping hand whenever he found an opportunity, and while he was voluntarily hauling on the braces he fell on the deck and was severely injured. On arrival at Aberdeen Doctors Scammel and Overmeyer removed him to the hospital and treated him. There was a question whether the captain induced the libelants to undertake the cure of the stowaway by promising that the ship would be responsible for their bill, but, according to the court's opinion, it is immaterial whether there was such a question or not. Judge Hanford in his decision adds:

"It is a principle of maritime law that a ship is liable for necessary medical treatment and expenses incident to the cure of seamen who become ill or suffer injuries in its service, but in this case the man who was injured imposed himself upon the vessel and neither the vessel, her owners nor master owed him any duty, except to give him humane treatment while he necessarily remained on board. He came to Aberdeen as a waif from the sea, helpless and destitute, and having no claim upon any particular individual, and was necessarily a public charge or an object of private charity. The captain of the ship, however, was not authorized to pledge the ship for the expenses of his cure or maintenance as an act of charity. The authority of the captain of a ship to pledge the credit of the ship is limited by necessity. In procuring things that are necessary to preserve the ship and enable her to proceed upon her voyage, his authority is ample, but he has no authority to enter into any contract which can be enforced by suit when not required to make his ship seaworthy, or to meet his obligations as a carrier or to her crew. The act of signing a ship's articles at sea under compulsion did not attach the stowaway to the vessel, nor create any obligation different from what necessarily arose from the fact of his being aboard by his own voluntary and wrongful act."

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#### SPANISH ORE—STEEL MAKING.

The leading industrial journal of Spain, commenting on the fact that a steamship had taken a load of iron ore to the United States and had just returned with a cargo of steel rails, deplors the almost entire lack of steel works in Spain and the consequent necessity of importing steel into a country that is very rich in iron ore of the best steel-making quality.

Spain has been the classic land of the mining industry since the time of the Phoenicians, and yet the main use the country makes of its rich supply of metal is to sell them to other countries. The splendid iron ore among the mountains of the north coast is hematite of the best steel grade. There is plenty of coal with which to reduce the iron ore, the coal output in some years being worth as much as \$30,000,000; but though Spain has every facility for making all the iron and steel the people need most of the commodities are imported.

In recent years, to be sure, considerable industrial activity has developed in Basque province among the mountains where the iron ore is dug out of the crust of the earth, and also in Catalonia, in the extreme northeast of the kingdom, mainly at the city of Barcelona and around it. The chief industry is the manufacture of iron and machinery, but not nearly enough are made to supply the demands of the country. So Spain continues to ship from Bay of Biscay ports thousands of tons of her fine ore to Great Britain, Germany, France, and Belgium, where it is used for steel making. Great Britain buys more than one half of the ore and most of it is smelted in South Wales, the chief seat of the Bessemer steel industry.

There is only one other country that is a great producer of iron ore and yet depends upon other lands to turn this raw material into pig iron and steel. That country is Sweden, which, however, has a good excuse for selling its ore instead of making iron and steel of it. Sweden has practically no coal, and therefore it is at a great disadvantage, for it is without fuel to smelt its ore, while Spain has both ore and fuel in abundance.

#### NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—MICHIGAN.

TREASURY DEPARTMENT,  
OFFICE OF THE LIGHT-HOUSE BOARD,  
WASHINGTON, D. C., December 26, 1901.

HOLLAND PIERHAED (BLACK LAKE) LIGHT-STATION.—Notice is hereby given that, on or about January 4, 1902, the fifth-order fixed red light at this station will be moved to and re-established in the new steel structure recently erected on the south pier, 76 feet nearer its outer end, entrance to Black Lake, Holland Harbor, easterly side of Lake Michigan.

The focal plane of the light will be 45 feet above mean lake level.

The structure is a white, square, pyramidal, steel tower, the lower half open, the upper half inclosed, surmounted by a black, ten-sided lantern.

On the same date the present fixed red post-lantern light, on the outer end of the south pier, will be discontinued.

By order of the Light-House Board:

N. H. FARQUHAR,  
Rear-Admiral, U. S. Navy, Chairman.

#### THE WINTER QUARTERS AT OWEN SOUND.

The vessels now wintering at Owen Sound, Ont., are the C. P. R. steamships, Manitoba, Alberta and Athabasca; tug Maitland; Chicago and St. Lawrence Transportation Co.'s steel carriers Rosedale and Algonquin; tugs Metamora and Magnolia, and the ferry Mazeppa; the Trudeau, Agnes, and the dredge, the steamer Milton lies in the drydock, and south of the drydock the Melvina, Lillie Smith and her consort, the Cyrenian. The Donnacona and Strathcona. Hiram R. Dixon, the steam yacht Viola, D. G. S. Bayfield, steamers City of Windsor, and City of Owen Sound, the tug Heather Belle, and the steam yacht Venetta.

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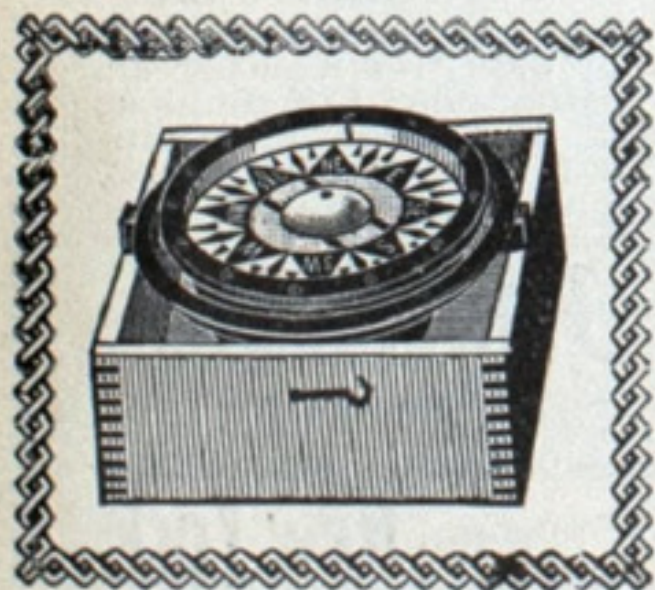
OFFICE OF THE BOARD OF PUBLIC WORKS, Milwaukee, December 10, 1901. Sealed proposals will be received at this office until Friday, January 10, 1902, at 10:30 o'clock a. m., for furnishing the propelling engine and its appurtenances, the steam fire pumps and the Scotch marine boilers for a new steel fire boat for the city of Milwaukee, according to plans and specifications on file in this office. Bidders desiring plans and specifications will be required to deposit the sum of \$50.00 as a guarantee for the safe return of the same. For further particulars apply to the Board of Public Works, Milwaukee, Wis., or to W. J. Wood, Naval Architect, 269 Fifth Avenue, Chicago, Ill. 52-1



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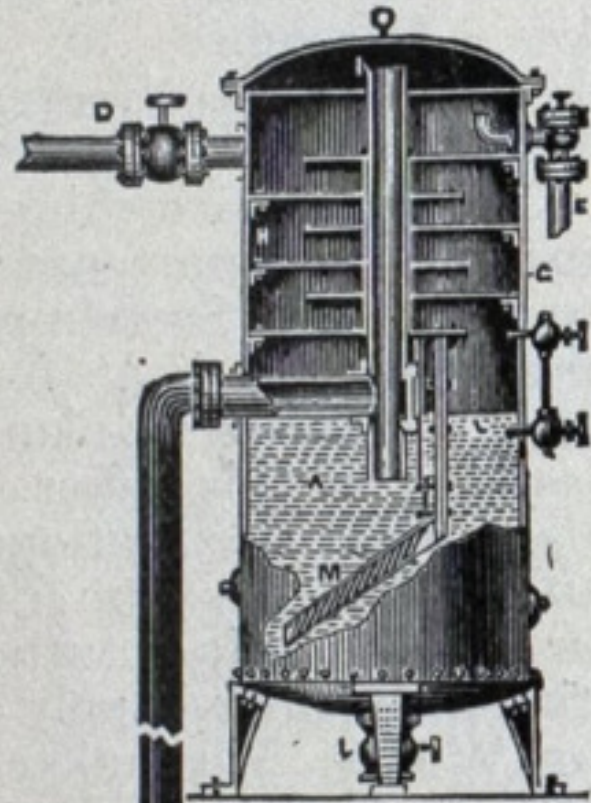
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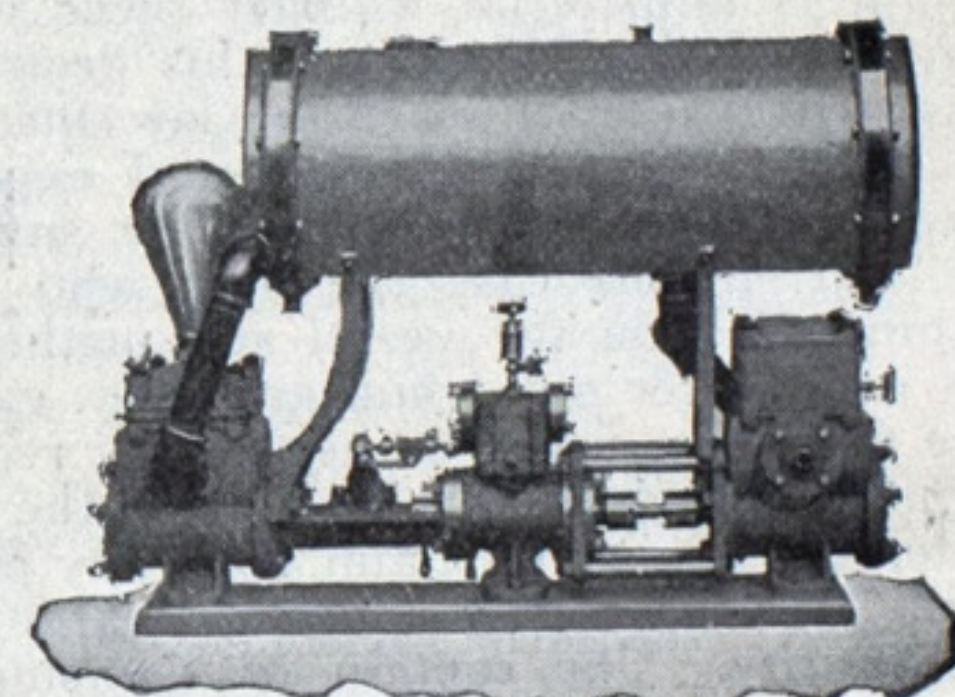


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## FLOTSAM, JETSAM AND LAGAN.

David Kahnweiler's Sons, 437 Pearl street, New York, the well known manufacturers of life preservers, life rafts, life boats, and other useful life saving appliances, have issued a very pretty calendar for 1902, with a marine picture attached, which they will send gratis to their customers and friends on application.

The total amount of coal received in Milwaukee during the year 1901 was 1,827,633 tons, against 1,651,442 tons during 1900. These figures include the shipments in by vessels and rail, and the increase of 176,633 tons this year over last shows the natural increase in trade. During the past few months Milwaukee wholesalers have been shipping coal out at the rate of between 5,000 and 6,000 cars per month.

Changes that have taken place in the management and make-up of the owners of the stock of the Reiss Coal Co., may mean much to Manitowoc. Although the company has conducted business on progressive methods and made many improvements in the dock, the introduction of enlarged capital and new material may result in further extension. A deal was closed recently whereby the Pittsburgh Coal Co., which furnishes largely the supply for the Reiss people, became interested in the Sheboygan company by the purchase of the interests of Mrs. C. Reiss and Fred Karstein, heavy holders of stock. No change in the directorship of the company will take place at this time although there will be a re-organization early in the spring. The company operates docks at Sheboygan, Manitowoc, Ashland and Escanaba.

The steamer Paraguay is in drydock in Philadelphia to repair damages received to her bottom while going down the St. Lawrence, for which she will cost the lake underwriters at least \$35,000. It is found that seventy-two plates will have to come off. Capt. McDougall is back from Kingston, where he went to look after the Canadian steamer Rosemount, which went on the bottom in that vicinity. He found that she would need repairs amounting to about \$4,000. The steamer Mark Hopkins, ashore above Long Point, Lake Erie, has been given up till spring, when she will be released if she remains in sight. The dis-

astrous trip of the Wetmore tow to Georgian Bay adds also to the generally high lumber losses of the season. With the Wetmore and the King lost and from 25 to 35 per cent. of their cargoes with them, the entire loss is heavy. About 200,000 feet of lumber was burned with the King.

Cape Race has nine complete wrecks to its credit this year—eight steamers and the large steel barkentine Titania. Of these six ships were in the St. Lawrence trade, and the value of hulls and cargoes was at least \$2,000,000. The groundings were sixteen in all, one of them being that of the British warship Indefatigable. The cost involved in these mishaps will approach another \$1,000,000 for the underwriters, while the British admiralty will be out of pocket \$135,000 through the stranding of the warship, which was so badly damaged that she could not cross the Atlantic to enter an imperial dock yard, but had to be repaired at Halifax. The Canadian shipping interest has been agitating for a reduction of the insurance premiums, which are now levied upon the St. Lawrence route at a much higher rate than is enforced against the American ports. But in the face of this casualty list it is not surprising that the agitation fails to effect anything. Insurance underwriters allege that their operations in the St. Lawrence the last ten years have resulted in an annual loss to them of over \$1,000,000 above the premiums received, and for their own protection against a continuance of such a state of things they have felt themselves obliged to advance the rates.

MR. ALEXANDER E. BROWN, of Cleveland, has invented an improved form of corrugated sheet metal which is particularly adapted in the construction of roofs, awnings, walls, etc., the patent for which has been assigned to the Brown Hoisting Machine Co., a corporation of Delaware with manufacturing and business offices in Cleveland. This important form of sheet metal has a series of dovetail-shaped corrugations, each of which is the same depth throughout its length and has a longitudinal taper which is reversed with respect to that of the next adjacent corrugation in the series. In addition to the patent for the sheet metal article Mr. Brown has also secured a method patent covering the manner of producing the corrugated sheet metal. This method consists first in introducing the material between

stamps or plunger dies and tongue-like dies, which are adapted to be operated in succession, preferably from the center of the train, thereby to anchor the central portion of the material and to leave the opposite portions thereof free to be drawn in by the plungers as they in turn descend into their respective die cavities. The stamps or dies are so shaped as to produce arch-like corrugations. The next succeeding step in the method of process is to introduce the material thus corrugated between die plates which have longitudinally-tapered dies and die sockets, whereby the corrugations are made dovetailed in cross section and tapered longitudinally.

## Government Proposals.

TREASURY DEPARTMENT, U. S. LIFE-SAVING SERVICE, Washington, D. C., December 17, 1901. Sealed proposals will be received at this office until 2:00 o'clock p. m. of Tuesday, January 7, 1902, and then publicly opened, for the construction of foundations, retaining walls, etc., for a life-saving station at Buffalo, New York. Specifications and drawings, forms of proposal, etc., can be obtained upon application to the Superintendents of Construction of Life-Saving Stations, 17 State Street, New York City; to the Superintendent of the 10th Life-Saving District, Custom House, Buffalo, New York; to the Assistant Inspector 10th and 11th Life-Saving Districts, Room 204 Postoffice Building, Detroit, Michigan; to the keeper of the Cleveland Life-Saving Station, Cleveland, Ohio; or to this office. S. I. KIMBALL, General Superintendent.

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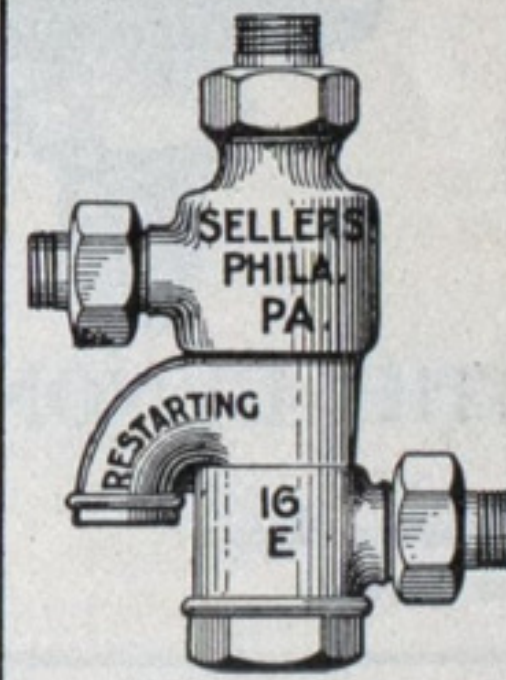
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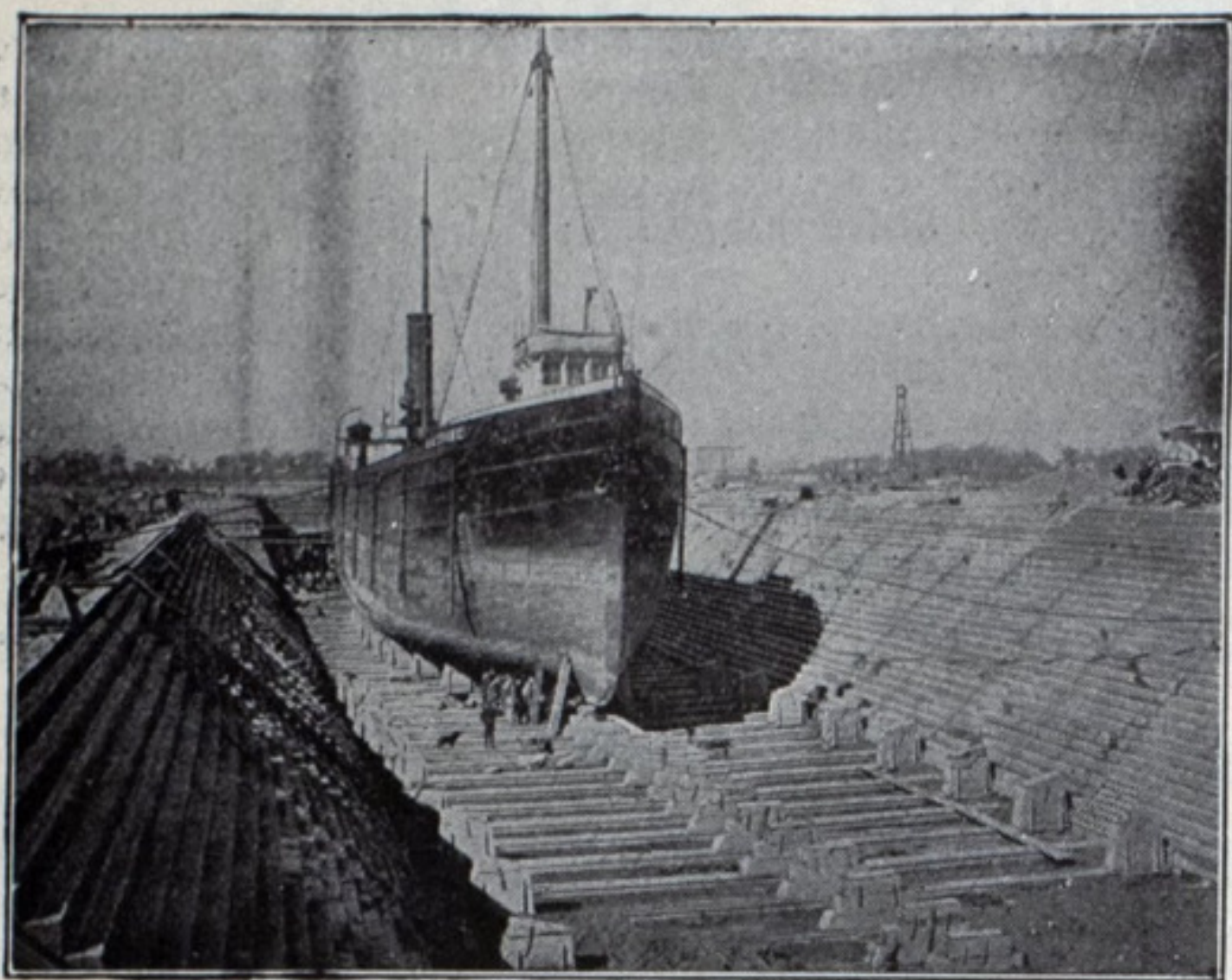
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